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ORIGINAL ARTICLES

OBSERVATIONS BASED ON ELEVEN HUNDRED OPERATIONS FOR GALL BLADDER DISEASES*

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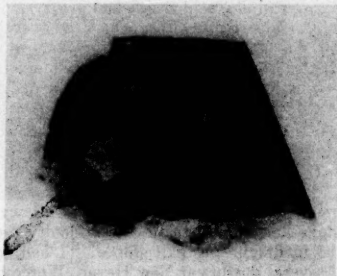
A TALK on gall stones may perhaps be "tedious as a twice told tale." Yet the writer dares bring to you the results of his twenty-five years' experience in gall bladder surgery, recognizing an attribute of a dutiful doctor as described by Dr. O. W. Holmes,—“to teach the young all that he himself had been taught, with all that his own experience had added; to leave on record some of the most important results of his long observation.”

In the twenty-five years from 1901 to 1926, 1103 operations on the gall bladder and bile ducts were done by the writer in St. Vincent Hospital. Over 90% of these operations were for gall stones. Four-fifths of the operated were women, and four-fifths of these women had borne children. In the eight years, 1914 to 1921, the mortality was 7.7%. In 1922, 5.2%; in 1923, 4.8%; in 1924, 3.8% and in 1925 the mortality was 1.9%. This low mortality in 1925 was not due to the efforts of any one individual, but rather to co-operative effort both in the preliminary preparation of the patient, and in the operating room. The patients were not selected. In recent years the operation done, has been, with very few exceptions, cholecystectomy.

As has been said, over 90% of our gall bladder operations were for gall stones. We therefore take the liberty in our remarks to deal mostly with gall stone diseases. We have become wary in the removal of gall bladders without stones. It is often difficult both for the internist and for the operator to tell when a gall bladder in the absence of stones is or is not diseased.

Hepatitis, in greater or less degree, as a rule accompanies cholecystitis; but it is noteworthy that such a hepatitis gives no definite clinical picture. “We were unable to find in the clinical histories of patients known to have hepatitis any symptoms that were especially suggestive of the inflammation. The same may be said of the patients in whom the liver changes had progressed to a stage of cirrhosis¹.”

Even to the surgeon, during operation, the gall bladder may look and feel normal and still be diseased—the mucosa of the fundus may be normal, but that of the lower part of the gall bladder diseased. We are as yet on the threshold of knowledge concerning disease of the gall bladder without stones, and, when it comes to the question of removing such a gall bladder, we must depend mainly upon a thoroughly exclusive diagnosis. Hence the surgeon must be on his guard lest by routinely removing inno-



Perforation of gall bladder wall. Perforation plugged, and made water-tight by an escaping gall stone.

cent gall bladders, he not alone may not relieve the patient's symptoms, but may also bring discredit on gall bladder surgery.

Since three-fourths of all gall bladder patients were women; and since 80% of these women have borne children, we must look for some factor in pregnancy as the most frequent predisposing cause of gall stones. Infection, and blockade of the bile current may and do cause gall stones, but in our present state of knowledge, it seems reasonable to infer that the cholesteremia of pregnancy is the most common cause. The cholesterol content in the blood increases during pregnancy until in the ninth month it is about double the normal. In taking the history of women gall stone patients it is

*Read before the Plymouth District Medical Society, March 15, 1926.

noteworthy, and of diagnostic value, to find that frequently the first colic or pain began either in the late months of pregnancy or soon after a confinement.

If, then, the cholesteremia of pregnancy plays such a prominent part in the formation of gall stones, it may be asked whether in the future some antidote may not be found that will prevent the formation of gall stones without at the same time jeopardizing this physiological cholesteremia.

Since about 10% of women have gall stones, and since operation for gall stones is far more frequent than formerly, it has come to pass that of late many women make their own diagnoses of gall stones. A woman gall stone patient said to the writer recently, "My women friends talk a great deal about gall stones—it used to be babies, but now it is gall stones!"

The diagnosis of gall stones has been of late years made easier by means of laboratory methods—but in the making of the diagnosis the history still plays a very important part. Authorities agree that cholecystitis is the most frequent cause of so called dyspepsia—very much more frequent as a cause than is peptic ulcer. It is interesting to note that the gall stone dyspepsia is of the flatulent type, due not to the quantity but rather to the quality of the food taken, such as, raw apples, acid fruits, and greasy foods. Two physicians in our series, who were operated for gall stones, had been unable for years to eat raw apples; but after their gall bladders had been taken out, they had no further distress after eating them.

While the diagnosis of gall stones may be easy, at times it may be so difficult that even the most expert physicians may fail in the diagnosis. In our series of operations was one of an emergency gangrenous gall bladder in a lawyer. The story he told illustrates the difficulty there may be in diagnosing gall stones: "I had consulted several doctors at New Haven, Worcester, Cambridge and Boston. Dr. A. of Boston, the stomach expert of that time, before my operation gave me an extremely thorough examination, I being stripped naked and the examination lasting for some three odd hours; the examination being on every part of my body from my head to my feet, stooping, bending, lying on the table, stomach up and back up, urine examination, etc., etc. Dr. A. assured me when he was through that I had no organic stomach trouble. I *didn't*—but I had gall stones."

Quite a few of our patients whose condition was diagnosed at first as emergency gall bladder disease requiring immediate attention proved rather to be cases of heart disease of the type called "angina abdominis." Such patients tax one's diagnostic ability to the utmost, since in certain kinds of heart disease, more especially in coronary sclerosis, the upper abdominal symp-

toms may closely simulate the symptoms of gall bladder disease. The onset of the attack and the character of pain may be similar, and there may also be present, to add to the confusion, jaundice and an enlarged liver, with tenderness and rigidity over the gall bladder region.

In the differential diagnosis between gall bladder disease and "angina abdominis" it should be remembered that coronary occlusion is by far more common in males than in females; that in gall bladder disease the converse is true. But, perhaps, the most differentiating diagnostic evidence is the previous history of the patient. Osler, in his charming and erudite manner, wrote this short note to the *Lancet* concerning "angina abdominis":

To the Editor of the Lancet:

Sir—Heberden knew an extra pectoral form of angina, but Leared was, I believe, the first to call attention to the group of cases which we now speak of as "angina abdominis," referring to the condition as "disguised heart disease."

A feature in some of these cases, to which I called attention in my Lumleian lecture, 1910, is the association of jaundice with the abdominal pains leading to the diagnosis of gall stones. In one of my cases an operation was performed but no stones were found.

I am, Sir, yours faithfully,

WILLIAM OSLER.

Oxford, May 24, 1912.*

In the differential diagnosis of gall bladder disease the X-ray of late gives us more definite evidence than formerly, through the use of a dye (Sodium Tetraiodophenolphthalein) which, in the gall bladder, gives a shadow showing its size and position. The gall bladder, if pathological, may not fill or filling may not empty. But we must remember that at times the X-ray may not detect diseased gall bladder: since the duct may be patent and yet the gall bladder be diseased:—for example, the gall bladder of the cholesterosis, the so called strawberry gall bladder; or, again, the gall bladder may contain stones so small that even the surgeon in palpating cannot feel them through the gall bladder walls, and such small stones may not obstruct the cystic duct so that the dye may flow through unhindered.

We have found the serum bilirubin test (van den Bergh) to be of very great value both in diagnosing and in selecting the proper time for operating.*

Bilirubin can be detected in blood serum before it appears in the urine or in the skin, and it may therefore be of diagnostic value in obscure cases of gall bladder disease. The van den Bergh test also determines accurately the amount of bilirubin in the blood in jaundice, and, hence, may be as informative as the blood urea determination in kidney diseases. The serum bilirubin test shows the increase or diminution of jaundice, hence it may be of aid to the surgeon in determining the suitable time for operation.

To operate or not to operate in gall bladder

disease—that is the question! The most important lesson taught me by my twenty-five years of study of gall bladder disease is the crying necessity of early operation; that once a diagnosis of gall stones or other diseases of the gall bladder is definitely established, operation is indicated. Early operation is in line with the present day practice of preventive treatment of disease. Many of us can remember the suffering and deaths previously so common in tuberculosis; but today, some authorities say that by

tract; and this may, and in some cases does allay the inflammation, but it does not cure.

What are the results from medical treatment of gall stones? This is answered by the experience of Professor Naunyn, who said: "I have treated in the Strassburg Medical Clinic alone some 250 cases of gall stone disease; of 150 of these sufficiently accurate clinical histories are in my hands. Of these 150, 20 died; 7 died in consequence of cholecystitis and cholangitis, fistula formation, perforation into the belly,



Mrs. L. Age 77. Operation October 1, 1910. Cholecystectomy. Gall bladder size of a football. Pathological diagnosis. Professor W. I. Councilman: "Adeno-carcinoma. Cholelithiasis." Recovery; lived 13 years afterward. (Pre-operative diagnosis was ovarian cyst.)

suitable preventive measures in early tuberculosis a cure results in 70-75% of the patients; and similarly with many other diseases.

Gall stones may, and, as a rule, do cause liver and pancreas disease. Often, if neglected, they cause cholecystic heart. In a word, they may cause all of the diseases that may result from an ever present infecting focus. The operative mortality now in early and uncomplicated cases is less than 2%. A too high mortality today is no argument against a well conducted operation for gall stones, but rather may be evidence of the inexperience of the operator. Operation for gall stones is not only safer than continued medical treatment but, as Moynihan has well said, it is far more merciful. The medical treatment consists of rest to the body, and to the digestive

abscess of the liver, etc. . . . Yet in many of these cases discharged as cured there has, indeed, been no real cure. Some went out as cured, still with slight sensitiveness and enlargement of the liver, and even in apparently completely cured cases occasionally recurrences took place after a few weeks."

This experience of Naunyn in the medical treatment of gall stones is of extraordinary interest since probably never again will we have a review of a large series of gall stone cases treated by an eminent physician.

In the time of Naunyn, over a quarter of a century ago, continued medical treatment was excusable since the operative mortality was high and the post operative morbidity severe. Compare now these results from Naunyn's medical

1901	Cholecystostomy	1	Died	0				
1903	Cholecystostomy	1	Died	0				
1904	Cholecystostomy	4	Died	0				
1905	Cholecystostomy	4	Died	0				
1906	Cholecystostomy	9	Died	2—(One had carcinoma of stomach)				
	Cholecystectomy	1	Died	0	Total	10	Died	2
1907	Cholecystostomy	14	Died	1				
1908	Cholecystostomy	11	Died	0				
	Cholecystectomy	3	Died	0	Total	14	Died	0
	Cholecystostomy				44		Died	3
	Cholecystectomy				4		Died	0
					1901-1908	48		
					1909-1913	190		
					1919-1926	865	Total	1103
					1909	25		
					1910	49		
					1911	35		
					1912	32		
					1913	49		
					190			

Statistics by Dr. Dumphy and Miss Blessington

1914	Cholecystostomy	11	Died	2					
	Cholecystostomy	19	Died	2	Total	30	Died	4	M. 3 F. 27
1915	Cholecystostomy	14	Died	0					
	Cholecystostomy	8	Died	0	Total	22	Died	0	M. 2 F. 20
1916	Cholecystostomy	20	Died	2					
	Cholecystostomy	12	Died	0	Total	32	Died	2	M. 2 F. 30
1917	Cholecystostomy	24	Died	1					
	Cholecystostomy	14	Died	0					
	Stone in common duct	1	Died	0	Total	39	Died	1	M. 6 F. 33
1918	Cholecystostomy	59	Died	1	Total	59	Died	1	M. 12 F. 47
1919	Cholecystostomy	65	Died	6					
	Cholecystostomy	3	Died	0					
	Stone in common duct	1	Died	1	Total	69	Died	7	M. 10 F. 59
1920	Cholecystostomy	63	Died	9	Total	63	Died	9	M. 9 F. 54
1921	Cholecystostomy	72	Died	5					
	Cholecystostomy	2	Died	2	Total	74	Died	7	M. 12 F. 62
					8 years: Total	388	Died	31—7.7%	
1922	Cholecystostomy	95	Died	5	Total	95	Died	5—5.2%	M. 14 F. 81
1923	Cholecystostomy	119	Died	6					
	Stone in common duct	2			Total	121		4/8%	
1924	Cholecystostomy	157							
	Stone in common duct	1			Total	158	Died	6—3.8%	
1925	Cholecystostomy	102							
	Cholecystostomy	1			Total	103	Died	2—1.9%	

treatment with the results of operation, in which the present day mortality in uncomplicated cases is less than 2%, and the morbidity, such as post operative herniae and adhesions, is almost negligible!

The ablation of a crippled gall bladder helps rather than harms the patient.

The causative factors in gall stones can as yet not be prevented; but we should endeavor to recognize stones as soon as possible after formation, and the present day knowledge of symptoms of gall stones together with improved X-ray technique permits as a rule of a definite diagnosis, and that too in the early stages, when we may take prompt measures to prevent further suffering and death; and since gall stones in women come mostly from pregnancy, it is as a rule a disease of early life, and early in the disease is the suitable time for cure.

Of late years the administration of calcium chloride to patients in jaundice, and of glucose to those with disabled livers, together with improved methods of preparation of kidney and heart, have made operations of the gall bladder much safer than formerly. Indeed the burden on a diseased liver or heart or kidney may, at times, be lightened by the removal of a diseased gall bladder.

I believe that the risk in gall stone operations comes mostly from the delayed operation; similar to the risk in delay in appendicitis. There is no known solvent for gall stones, and there are no means other than operation which will

remove them. The term innocent gall stones is a misnomer, since when present gall stones are potential incubators of disease, suffering and death.

Who shall operate for gall stones?

The injunction of Hippocrates, although for urinary stone, is applicable here. Hippocrates said: "I will not cut persons laboring under the stone, but will leave this to be done by men who are practitioners of this work."

The master surgeon, Moynihan, says this of gall stone surgery: "The surgery of cholelithiasis is difficult, sometimes extremely difficult. I hold it to be of greater technical difficulty and to present more problems for immediate accuracy of judgment, than any other branch of surgery. . . . If I might presume to offer any advice to the surgeon who has not great and continued opportunities for practical work I would suggest to him . . . to leave the surgery of the gall bladder alone."

I wish to acknowledge my gratitude to Dr. W. F. Lynch for his ever willing and skillful cooperation; to Sister Mary Leocadia, the head of our operating room, and to Dr. J. J. Dumphy and to Miss C. F. Blessington for their assistance.

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BOSTON CITY HOSPITAL STAFF CLINICAL MEETING

Saturday, November 27, 1926

HEMOLYTIC JAUNDICE

Dr. H. A. LOTHROP: This patient is a girl I saw outside, on whom the diagnosis of gallstones had been made. The chief thing was jaundice of four years' duration with no pain. I sent her into the hospital and referred her to the Medical Service for study. X-rays were negative.

Dr. W. B. CASTLE: The important step in the diagnosis of this case was made when Dr. Lothrop thought of hemolytic jaundice and decided not to explore for pathology of the gall bladder or bile ducts. He referred the patient to Dr. Peabody's service for study.

The patient is an unmarried woman 25 years old, who works as a filing clerk. The history briefly is that four years ago she had an attack of pain in the right upper quadrant, not radiating or lasting more than a short time. At that time she was noted to be jaundiced. Since then she has not felt very strong, has lost 22 pounds, and has suffered from occasional mild abdominal pains with a variable degree of slight to moderate jaundice of the skin and sclerae. She never noticed anything unusual about stools or urine. Her paternal grandmother is

said to have had jaundice for 30 years until her death at the age of 65. A cousin on the father's side has had jaundice, without other remarkable symptoms, for some time. Physical examination showed some undernutrition, slight jaundice of the sclerae, and pallor of the mucous membranes. The other findings are unimportant with the exception that the tip of the spleen was just felt on one occasion. Dr. Peabody and his staff considered the usual causes of jaundice of such long duration, but when the laboratory data were obtained there seemed to be no question but that this was a case of familial hemolytic jaundice. The dark stools, absence of bile in the urine, and evidence of a moderate anemia of a secondary type with a marked activity of the bone marrow, indicated by high percentage of reticulated red cells in the smears, together with an increased fragility of the red cells in hypotonic salt solution, needed only the general observation that the patient was more jaundiced than sick to settle the diagnosis of familial hemolytic icterus.

In the Thorndike Laboratory we undertook to follow carefully the effect on the pigment metabolism of the removal of the spleen, which was recommended by the medical service. We followed the urobilin in the stools by the method of Elman and McMaster, and the serum bile by

means of the Murphy icteric index. Absolute values are not of importance at this moment, but from Figure 1 it is evident that, shortly

marked fall of the urobilin output and a disappearance of the excess bile in the serum. Indeed, the latter is now below the normal value

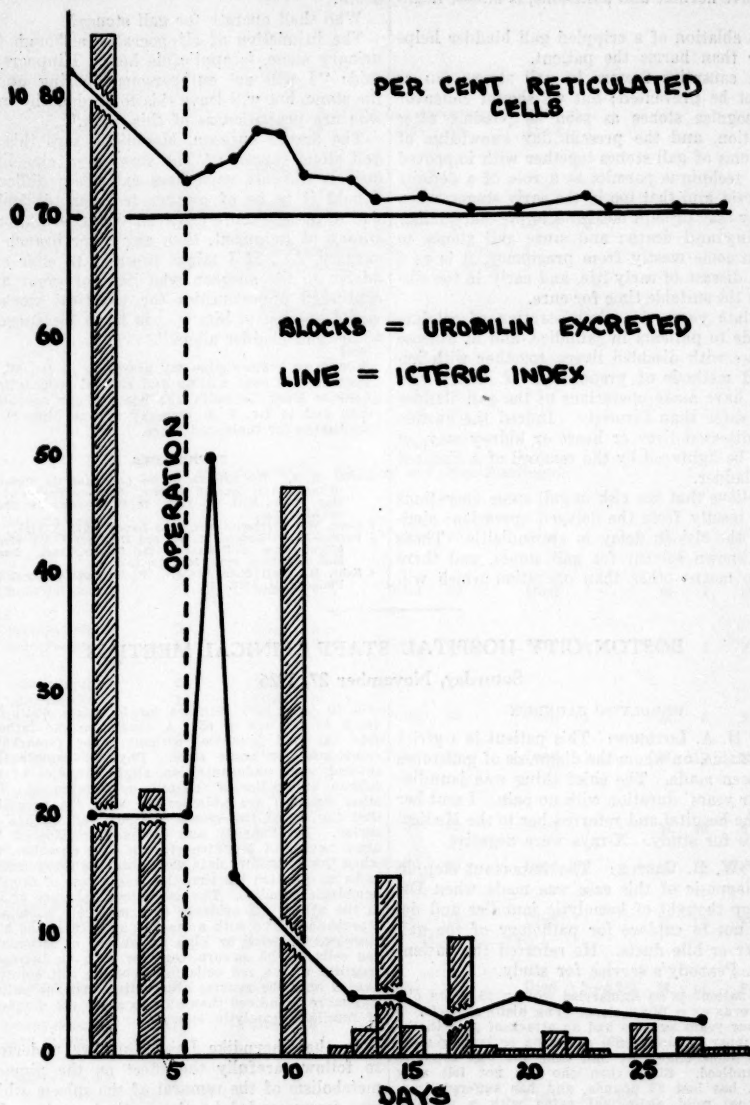


FIGURE 1. Hemolytic jaundice.

following the operation by Dr. Lothrop with the removal of an enlarged spleen showing microscopically a chronic splenitis, there was a

At the same time the patient's jaundice disappeared clinically.

The urobilin output is usually considered the

best method of estimating the rate of red cell destruction. Here then it is interesting to notice the cessation of excessive marrow activity as the drain on the red cells stops with the removal of the spleen. This is also indicated by the fall of the reticulated red cell percentage from 3 to a normal figure of about 0.5 at present. Following the removal of the spleen there is sometimes a "crisis" in which large numbers of immature red cells containing nuclei or their fragments are hurled into the blood stream. This thing perhaps happened very mildly for three days following the splenectomy, and resulted in a considerable increase in the white blood cells with a few nucleated cells in the smears on two days. The operation is a factor complicating the interpretation of these facts, however. Finally, I think that there is here, in a roughly quantitative way, an illustration of the usual beneficial effect of splenectomy in this disease in stopping the enormous red cell destruction and hence abolishing the jaundice.

DR. H. A. LOTHROP: There is nothing to add surgically. The jaundice has disappeared, her general malaise has gone and she is in excellent health. There was no difficulty in performing the splenectomy. Palpation of gall bladder showed it to be normal.

GENERAL PARESIS TREATED BY INOCULATION OF MALARIA ORGANISMS

DR. A. MYERSON: I am presenting two cases of men with general paresis who are being treated with malarial inoculations. It is interesting from the diagnostic standpoint to note that one of these men had merely the symptoms of a hypochondriacal neurasthenic, and his case illustrates the fact that when a man of middle life develops such symptoms, an organic situation should be searched for before the diagnosis of a neurosis is made.

The latest development in the treatment of general paresis has been the inoculation with malaria. This work started with the researches of Wagner Jauregg. Jauregg noted, as has been noted before him, that mental disease of any type often seems to improve after infections, and further, and what is more pertinent, that German soldiers who return from the tropics and who have had syphilis, do not seem to develop general paresis in the same proportion as people from other regions. The basis of this relative immunity he believed to be the malarial infections from which they suffered. He then started the treatment of general paresis with malaria.

The type of organism inoculated is the tertian variety. The dose is 2 c.c. of the blood of a patient with active malaria, either taken in some citrate solution or deposited immediately in the

veins of the recipient. In this case, the stock solution came from patients at the Psychopathic Hospital, and our patients were each given 2 c.c. of the citrated blood. Within five or six days, each of these men developed malaria with a marked parallelism in their paroxysms, so that their chills and sweats almost coincided. In the routine treatment some 15 to 20 paroxysms are permitted, and then quinine is given and the malaria checked.

The indications to cut short the malarial infection are first, hemolytic jaundice, second, anemia, and third, failure of nutrition. One of these patients developed hemolytic jaundice, while the other man is showing no danger symptoms whatever. It is interesting to note that the type of tertian malaria which we used seems to give chills rather irregularly and about a little over a day apart, rather than every other day. The technique of cutting short the malaria is to give some 15 to 20 grains of quinine three or four times a day for a few days, and then to give smaller doses for about a month.

What are the results? Both in Europe and America, many of the workers claim to have seen far more remissions through the use of malaria than with any other form of treatment. For example, Nonne, who is one of the leading authorities on neurosyphilis, believes that the inoculations mark an era in the treatment of general paresis. Other writers are not so enthusiastic, but, on the whole, the number of remissions recorded seems to be greater than the number recorded from other forms of treatment. The cases have to be selected carefully. Younger individuals who are in general good condition, and do not show a profound dementia, are best suited for malarial inoculations. Both from the theoretical and practical standpoints, the use of malaria in connection with the treatment of syphilitic infection of the brain is a step of great interest.

SPONTANEOUS RUPTURE OF UTERUS

DR. N. R. MASON:

Patient—A.: age, 28 years; married 9 years. Entered Boston City Hospital October 13, 1926.

Previous History. Diphtheria as a child.

Obstetrical History. One miscarriage five years ago at 3-4 months. One full term baby 4 years ago delivered in Boston City Hospital by classical cesarean section; performed because of a high presenting breech and failure of the cervix to dilate after 24 hours of unsatisfactory labor with ruptured membranes. The uterine incision was extended by a tear down under the bladder reflex because of a fibroid. This fibroid was removed and the uterus was repaired. The convalescence was slightly septic. Mother and baby were discharged well.

Present Illness. The last period was on January 28, 1926. Labor was expected November 4th which made the patient due to be confined 22 days later. A mild toxemia had been present for one week. At 5 a. m. on the morning of admission the patient had 6 slight labor pains. One hour later slight flowing began and continued, but there were no more pains.

The patient entered the hospital at 8 a. m. and was seen at 9:30 a. m., four and one half hours after the first one of the 6 pains had occurred.

Physical Examination. Obese woman with abdomen of full term size. Complaining of slight abdominal discomfort. Slight general tenderness on abdominal palpation, such as is frequently seen after the start of labor. Pulse, 100, and of good quality. Rectal examination showed no cervical dilatation; presenting part not made out. Vaginal examination not made, but slight flow of dark blood was observed.

Operation. Immediate laparotomy was performed with the expectation of doing a second cesarean, which was indicated because of septic convalescence after the former cesarean which tended to weaken the scar and predispose to rupture of the uterus. On opening the abdomen there was directly underneath the incision a dead fetus with intact membranes. The entire placenta was also found free in the abdominal cavity with a large amount of old clotted blood. Extensive omental adhesions were present along the left side of the uterus. The uterus was split open along its entire anterior face at the edge of the former scar and in the area where it had previously been torn and the fibroid removed. Owing to the marked eversion of the two sides of the uterus at the site of the rupture it was deemed unwise to attempt to repair, so a Porro operation was performed, amputating the uterus at the cervix. The peritoneal cavity was drained with a gauze wick placed in the lower angle of the incision. The patient passed into moderate shock toward the end of the operation and 1000 c.c. of salt solution were injected beneath the breasts.

Convalescence. The convalescence was smooth excepting for a slight puerperal infection. She repeatedly stated that she suffered no discomfort at any time following her delivery. She was discharged on the 16th day. She presents now a pin point sinus in the skin at the upper angle of the wound which has not quite closed.

Conclusions. This case is brought to your attention because of the grave condition presented with very slight symptomatology. It illustrates well the serious condition which occasionally develops in the abdomen of the pregnant woman with but very little evidence and which demands prompt operative interference, but which left alone results in death.

In connection with this case, it is worth while to allude to the doctrine which has been advanced and promulgated by some high-handed obstetrical authorities. I refer to the fallacious and pernicious custom expressed in the tri saying—"Once a cesarean—always a cesarean." Certain over-zealous obstetricians have actually tried to force such an edict on the obstetrical world and make it mandatory. As a result many women have unnecessarily been subjected to the grave risks of repeated cesareans when they might have been allowed to deliver themselves normally or to have been delivered by some vaginal operative procedure.

My colleague, Dr. John T. Williams, and I established two decades ago that a woman might in certain instances be allowed to have a vaginal delivery following a previous cesarean section. We need to go no farther away from home than Baltimore to find in Professor J. Whitridge Williams a strong advocate of vaginal delivery

in certain women who have had a previous cesarean section. The requisite conditions for a vaginal delivery in such cases are two; (1) a uterus properly sutured at the time of cesarean, and (2) a convalescence free from infection of the wound following the cesarean.

These conclusions were arrived at by animal experimentation, pathological study, clinical observation and review of the literature. I have no hesitation in allowing suitable cases to deliver themselves by normal labor following a previous Cesarian or be delivered by a vaginal operative procedure, such as a low or high forceps or internal podalic version.

DR. J. T. WILLIAMS: Of course, we understand that where a permanent indication for cesarean section exists there is no question of the necessity of repeated cesareans. But during the last few years cesareans have been performed for temporary indications, such as eclampsia, placenta previa, primiparous breech, ovarian tumors obstructing delivery, etc. I personally have had 15 patients who have had cesarean sections for temporary indications and whom I have allowed to go into labor. One patient I have delivered without difficulty by vagina five times since her cesarean. One must be sure that the convalescence has been afebrile and that there has been no infection to weaken the scar. Five per cent. is the mortality of cesarean and the mortality of rupture is two per cent.; so that it boils down to a question of mathematics. You are giving the patient a better chance to go through labor by vagina if there is no pelvic obstruction.

ACUTE HEMORRHAGIC NEPHRITIS

DR. SOMA WEISS: These two patients are suffering from acute toxic hemorrhagic nephritis and are shown here because they present the extreme variations of the clinical picture of this disease; furthermore because they are somewhat unusual in their etiology.

This little girl, 13 years old, two days before her admission, September 20, experienced sudden precordial pain which was sharp, non-radiating, and increased by respiration. At the time of admission her respiration was shallow, and there was a to-and-fro friction rub over the second costal interspace on the left side of the sternum. Her temperature was 102°, and her white count was 34,000. Although we thought of the possibility of lobar pneumonia there was no evidence of pathology in the lungs at that time. Two days later, however, classical signs of consolidation of the right lower lobe appeared. Five days later the temperature subsided by crisis and there were signs of resolution over the right base. Two days after her crisis, the urine which had been normal before showed red cells, white cells, and occasional casts. The red cells and white cells increased gradually, the urine became bloody. The sediment showed granular casts and red cell casts. It was evident that the patient was suffering from an acute hemorrhagic nephritis. Although the urinary findings were pathological it is interesting that the

patient did not show any marked systemic manifestation of nephritis. The blood chemistry and the phenolphthalein output were normal. Similarly the eye grounds, blood pressure and vital capacity were normal. At no time did we observe edema. There was a reduction of the hemoglobin from 85 per cent to 65 per cent, perhaps the only systemic evidence of the disease. The patient was put on a low nitrogen diet. At the present time she is symptom free, and the urine shows only a trace of albumin.

The unusual feature in this patient's condition is that the pneumonia started with acute pericarditis. Unfortunately we are not certain whether we are dealing with a pneumococcus or streptococcus pneumonia, and therefore it leaves open the problem whether we are dealing with a sequella of a pneumococcus or a streptococcus infection. As far as I know, it is rare to observe acute hemorrhagic nephritis following lobar pneumonia.

This next patient, who is 33 years old, and a housewife by occupation, developed eczema following ivy poisoning. She has been treated for this condition in the Out-Patient Department of the Massachusetts General Hospital during the past six months. Her urine in this period was negative. Five days before admission, August 22nd, the patient noticed swelling of the face and extremities. Simultaneously she developed an unusually extensive intertrigo covering almost the entire skin area. The physical examination was otherwise normal. Soon after admission to the Skin Service of the Boston City Hospital the patient became comatose and developed respiratory distress associated with acute edema of the lungs. During this attack of dyspnea there was marked cyanosis and inspiration and expiration were labored, all the accessory respiratory muscles being active. There was expiratory wheezing with numerous ronchi. Clinically it was like a typical attack of bronchial asthma or like a respiratory attack associated with anaphylactic shock. The heart rate was between 140-160. A few hours afterward the patient recovered from the dyspnea and cyanosis, but then developed projectile vomiting and later repeated convulsions. The patient's condition at this time was critical.

To combat the status epilepticus we administered large doses of luminal by rectum and then performed lumbar puncture. The spinal fluid was under markedly increased pressure. After the removal of 25 c.c. of fluid the convulsions stopped at once and the patient became conscious. There was no further vomiting.

It was evident that the patient was suffering from acute uremia. Her blood pressure was 220/100. The urine was grossly bloody with numerous white cells and all the different forms of casts. The phenolphthalein output was 10 per cent and the blood non-protein-nitrogen was 47 mgms. per 100 c.c. On low nitrogen diet during the following four weeks the patient improved gradually, the blood pressure fell from 200/110 to 120/70, the hemorrhages in the eye grounds, which developed a few days after the uremia, disappeared or became absorbed and the vital capacity which was low at first gradually rose to normal. The edema subsided, the intertrigo improved, the blood in the urine became very scanty and later disappeared completely. Other pathological elements in the urine were no longer present and the blood chemistry showed values which were normal. At the present time the patient is perfectly normal except that she is still suffering from the eczema.

It is of interest that, although this patient showed very marked systemic manifestations of

the disease, she recovered apparently completely; and it is well to remember in connection with this patient that while the treatment of uremia of chronic nephritis is a very discouraging problem, the prompt and rational treatment of uremia of acute nephritis will often save the patient's life. During the last two years in acute uremia we have found repeatedly that the intracranial pressure is very high and that, following lumbar puncture and after the administration of large doses of sedatives, the patients improve rapidly. It is interesting also that, although this patient had uremia, the non-protein-nitrogen was only 45 mgms. per 100 c.c. We have observed similar findings in other patients who entered the hospital with acute hemorrhagic nephritis and uremia, and in whom the nitrogen retention in the blood is only slight. Is it perhaps that some other substance, which we cannot measure at present, precipitates uremia, or is uremia due, not to retention substances in the blood, but rather, to edema of the brain as a result of physico-chemical disturbances between the blood and the tissues? We suspect this because several patients in uremia often exhibit localized and scattered neurological signs which may last for a few days only and then disappear completely.

The question is now, what is the prognosis? I would like to emphasize that we know but little about prognosis in acute toxic hemorrhagic nephritis. May I add that I never saw a case of chronic interstitial nephritis, so-called, with contracted small granular kidney in which I could be certain from history or previous medical observation that the patient had acute hemorrhagic nephritis? It may be that the two types of nephritis, acute hemorrhagic nephritis and chronic interstitial nephritis, are diseases of different origin—that is to say, they may be two separate and independent conditions. Of course there are cases in which acute nephritis goes on for months and the patient eventually goes into uremia and dies, but in those patients I have not seen granular contracted kidneys.

While the progress of our knowledge of the clinical and pathological correlation of kidney disorders is very slow, I think some light gradually appears through the clouds. Evidence is accumulating that infections and other exogenous factors play an important role in the etiology of acute toxic nephritis, while in the case of so-called chronic nephritis, generalized chronic vascular changes in the arteries, arterioles and capillaries are of great significance.

The realization by physicians of the fact that the relation between acute toxic hemorrhagic nephritis and chronic interstitial nephritis, so-called, is practically unknown or at least not clear, is of great practical importance. The happiness of many young adults is spoiled

through rigid diets and restricted activities imposed long after recovery, as a result of the belief of the physician that his patient, after recovering from acute toxic hemorrhagic nephritis, is a potential chronic nephritic.

CARDIO-PNEUMO-FIBROSIS

DR. H. W. DANA: Dr. Ritvo has some very interesting plates of a boy, aged 11, with a hemolytic streptococcus septicemia with both acute and chronic endocarditis. It is of interest to note that this patient's serum gave positive Kahn and Wassermann tests, presumably because of the severe bacteremia. There was no evidence of syphilis and the family history was negative. The lung plates, taken a month apart, show the development of a generalized fibrosis, the result of cardiac decompensation, which eventually led to death.

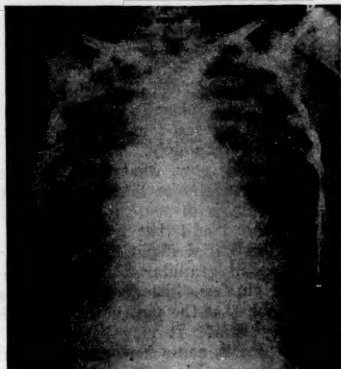


FIGURE 1. Cardio-pneumo-fibrosis.

DR. M. RITVO: This plate (Figure 1) illustrates the changes in the lungs secondary to cardiac decompensation and chronic passive congestion. The name "cardio-pneumo-fibrosis" has been applied to this condition, and, although it is not really a good name, it has been used up to the present for want of a better. The American and English literature contains very few references to this interesting and rather common condition, although I have found numerous German references with full discussions. A paper by Dr. Holmes in the *American Journal of Roentgenology* for May, 1923, is one of the few in American literature.

As you look at the plate, the most striking thing about it is that it appears to be pale and gray, with very poor definition throughout. This is not due to faulty technique for we have found that all the plates showing the typical

picture of cardio-pneumo-fibrosis have this appearance, no matter how carefully they are taken. The lung markings are very much broadened, this widening being most marked in the hilus and diminishing uniformly as they go outward. The changes are bilateral and both hila are very markedly enlarged. The bases show a definite clouding with haziness of the diaphragms and obliteration of both costophrenic angles. These changes show that there is a small amount of fluid at both bases.

The heart shadow is also very much enlarged with a bulge in the region of the left auricle and it is this change which gives the clue that the heart is probably responsible for the changes in the lung fields.

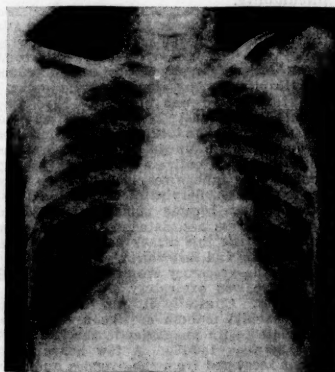


FIGURE 2. Cardio-pneumo-fibrosis.

This plate (Figure II), made about one month before the one we have just discussed, shows the heart slightly enlarged with no changes in the lung fields. This confirms our belief that the changes in the lung fields have followed the cardiac break-down. We have also noted, in other cases, that plates made a few days after the restoration of compensation, have shown disappearance of the pulmonary changes.

In tuberculosis the pulmonary changes are apt to be at the apices and upper lung fields. Tuberculous pleurisies are usually unilateral. The hilus shadows in tuberculosis are more irregular and show a more marked density than we see here. The cardiac shadow is usually normal and the plate in tuberculosis does not have the hazy appearance that has been previously mentioned as being so often found in cardio-pneumo-fibrosis.

In metastatic malignancy involving the lungs, the process is usually more irregular and

does not show the uniform diminution in density of markings as they recede from the hilus. Dust fibrosis also presents a picture which is very different from that seen when the changes are secondary to cardiac failure.

One reason in particular for our interest in this condition of cardio-pneumo-fibrosis is that we have here a very important factor in estimating our prognosis. If we feel that a heart is decompensated clinically, we have a graphic demonstration of the severity of the cardiac break-down. Also the speed with which these changes disappear, after rest and digitalization, give valuable information as to what has taken place in the heart and lungs.

PRIMARY CARCINOMA OF THE NECK

DR. I. J. WALKER:

This man, 50 years old, entered November 4th for a tumor on the left side of his neck. He was well up to three months before entrance. Then, while shaving, he noticed a swelling about the size of a marble on the left side of his neck. This has increased in size. Family history negative; no tuberculosis or cancer. His past history is essentially negative, except for a question of previous syphilis. Physical examination was negative except for local condition, which showed two glands on the left side of the neck, one behind the angle of the jaw, and the other half way down the neck, anterior to the sternocleidomastoid muscle. They were neither tender nor fluctuant.

Blood smear was negative. Red and white counts were within normal limits. Blood Wassermann negative.

The differential diagnosis narrowed down to three conditions: acute inflammation, new growth, or tuberculosis. There was nothing in his mouth to account for any acute inflammation, such as diseased teeth or tonsils. The glands were movable, not tender or fluctuant. There was no increased white count. He had no temperature. All of these were against inflammation. There was nothing in the mouth or pharynx indicating a primary lesion or malignant disease. This fact, combined with the discreteness of the glands, was rather against a diagnosis of carcinoma. The larynx up to this time had not been examined. The preoperative diagnosis was tuberculosis.

We operated on November 8th and removed first the lower of the two glands. We found an encapsulated gland, the contents resembling a caseated gland of tuberculosis. The gland behind the angle of the jaw on removal appeared like a tubercular gland, not broken down. A rush diagnosis came back "Carcinoma." The man had not been taking his intranasal ether well. Because of this, and because the rush diagnosis showed carcinoma, we surmised that he might have a carcinoma of the larynx. We

went no further that day, but waited to investigate the larynx. This was done two days later. No primary growth was found.

On November 16th, we did a bloc dissection of the neck on the left side. The incision started under the chin and followed outward under the jaw to the mastoid process. It then passed downward along the anterior border of the sternocleidomastoid muscle to the junction of the sternum and left clavicle, and then outward along the latter to a point at about the middle and outer thirds. This gave a Z-shaped incision, making two triangular flaps, the base of one being the midline of the neck, and the base of the other a line drawn from the mastoid process to a point at the middle and outer thirds of the clavicle. This gave ample exposure to the important triangles of the neck. We removed the sternocleidomastoid muscle, the jugular vein, submaxillary gland, and all lymphatic nodes. Radium in the form of needles was laid in the upper part of the wound in the region from which the second gland had been removed.

Diagnosis: Primary carcinoma arising from a branchial cleft.

DR. F. B. MALLORY: The specimen from Dr. Walker's case was discrete, a lymph node invaded with something. At first it looked like tuberculosis but there was something odd about it and microscopic examination of a frozen section showed it to be an epithelial tumor. Later examination demonstrated it to be an epidermoid carcinoma with some calcification.

Now is it primary or secondary in the neck? If it were primary it might come from the remains of a branchial cleft or be an adenoma arising from a sebaceous or coil gland. Tumors of the neck are likely to be secondary because the neck drains a large area. In this case the patient should be examined with the greatest care to see whether the tumor may not be secondary.

Many of these tumors in the neck are called endotheliomas because the primary source cannot be found. A man came to me whose neck had been dissected for a primary tumor which was diagnosed endothelioblastoma. I said it was metastatic and that the primary tumor should be carefully looked for. Six months later the patient himself found the primary tumor at the back of his tongue, and later died from it.

Dr. Wolbach told me that he has had four tumors of the neck which were secondary to tumors in the nose and throat, and one at least of them was not found until many months after the nodule appeared in the neck. Tumors of the neck may also come from the larynx, trachea and esophagus. I had a case in which the primary tumor was in the testicle, but was not suspected until six months after the secondary tumor in the neck was removed.

To sum up, then, it is best to regard all tumors in the neck as secondary and to look for the primary lesion elsewhere.

PAGET'S DISEASE—Case presented by Dr. C. Phipps, X-ray plates shown and discussed by Dr. M. Ritvo.

PEMPHIGUS NEVUS—Cases presented and discussed by Dr. W. B. Boardman.

OSTEOMYELITIS OF FEMUR—Case presented and discussed by Dr. D. Munro.

HYPERTROPHIC ARTHRITIS OF HIP TREATED BY

ARTHRODESIS (HIBB'S OPERATION)—Two cases presented and discussed by Dr. F. J. Cotton.

INTERNAL SQUINT TREATED BY MUSCLE TUCKING; CHRONIC DACRYOCYSTITIS TREATED BY DACRYORHINOPLASTY—Cases presented and discussed by Dr. J. J. Corbett.

! METASTATIC CARCINOMA OR TUBERCULOSIS OF LUNG—Case presented and discussed by Dr. H. W. Dana. X-ray plate shown and discussed by Dr. M. Ritvo.

COELIAC DISEASE; MARKED MALNUTRITION—Cases presented and discussed by Dr. M. J. English.

DUODENAL ULCER WITH REPEATED OPERATION; CHOLECYSTECTOMY; UNUSUAL ANOMALY OF APPENDIX—Cases presented and discussed by Dr. D. D. Scannell.

HEMATOCOLPOS—Case presented and discussed by Dr. N. R. Mason.

ATRESIA OF VAGINA—Discussed by Dr. N. R. Mason.

THE TREATMENT OF CHRONIC BRONCHIECTASIS*

BY WYMAN WHITTEMORE, M.D., F.A.C.S.

THE treatment of chronic suppurative bronchiectasis that is limited to one lobe of the lung, has been a subject that has fascinated surgeons interested in thoracic surgery for many years. At the present time it does not seem to me that the solution of the problem has been found.

In speaking of the treatment of this disease, it is only fair to mention all the various possible methods of treating it, although all methods except surgery seem to me to offer no hope of a cure.

Medical treatment may be dismissed by saying that it can never cure any case, although if the patient can devote his life to taking care of his health, spending his winters in a warm, dry climate, using postural drainage, it may be that he will live a long and fairly comfortable life. There is no drug that has any definite influence in curing this disease.

Bronchoscopy will not cure this disease, but if the patient is willing to be bronchoscoped at regular intervals, there is no question but what his condition will be improved, in that the septic symptoms will largely subside and the amount of pus raised will be diminished. It seems to me that the most benefit from bronchoscopy is obtained from the aspiration of the pus from the bronchial tree, by the dilatation of any stricture or strictures of the bronchus and, possibly, the removal of any granulation tissue that is tending to obstruct the bronchus. I do not believe that irrigation of the bronchial tree or the injection of medicated oils has any bear-

ing on curing the condition. The early bronchiectasis cases, that are caused by a foreign body, are cured by its removal. But it is not this group of cases that is included in this discussion.

The third possible method of treating these cases is by artificial pneumothorax. Here, again, we do not believe that any cure can be brought about by its use. On the other hand, if the lung is not adherent to the costal pleura, so that it may be completely collapsed, the general condition of the patient will be improved and the amount of sputum raised very much diminished, as long as the lung can be kept collapsed. But when it is allowed to expand, the symptoms return and it is found that the disease has not been cured. In most instances in which artificial pneumothorax treatment is used, at some time during the treatment fluid will come into the pleural cavity, which causes the artificial pneumothorax treatment to be abandoned, and in many cases it will become infected. Then the condition becomes more serious, because to the bronchiectasis there is added an acute empyema. In artificial pneumothorax the danger of air embolus should always be remembered. Up to a year or two ago, it seemed to us that in certain instances in which the patient suddenly collapsed, to gradual recovery, or died, as the case might be, while the pleural cavity was being injected with air or aspirated for diagnosis or irrigated in cases of empyema, that the condition of collapse or the fact of death could be explained by a pleural reflex.

*Read before the Boston Surgical Society, December 6, 1926.

which tended to inhibit the heart's action. But the feeling among men familiar with this work during the last year or two, is that the condition is due to air embolus, the air entering a vein that happens to be just where the needle is put into the pleural cavity.

There are several methods of treating this condition by surgery. The first is collapsing the lung by extrapleural thoracoplasty in cases in which an artificial pneumothorax can not be performed on account of adhesions between the lung and the costal pleura. We feel that there is no evidence pointing to a cure being brought about by this operation. It is undoubtedly true that the general condition of the patient suffering from this disease may be markedly improved, so that the septic signs disappear and the amount of sputum raised each 24 hours may be reduced as much as two-thirds, so that a patient who has been raising 30 or 40 ounces of pus each 24 hours, finds after the operation is completed that he raises only 10 or 12 ounces. This operation seems to be a very safe procedure, when done in a number of stages, as the mortality is very low. It is the only hope for patients in which the disease involves more than one lobe of the lung. This operation, by which one lobe was collapsed, has been followed by a second in which a large dilatation of the bronchus was drained, but this has not produced any cures.

There is no reason to suppose, when the pathology of this condition is remembered, that drainage will produce a cure. It is quite justifiable to drain a large dilatation of a bronchus or to drain a large abscess when the infection has worked through the wall of the bronchus into the parenchyma of the lung; but this should be done only with the idea of temporarily relieving the condition of the patient and not with the idea of producing any cure. In drainage of this condition there are many parts of the bronchial tree or of the diseased part of the lung, that will not be drained by the operation, so that the patient will continue to raise a certain amount of sputum, and this operation merely changes the mode of drainage—formerly the patient drained by raising the pus with coughing; following the operation it drains out the back.

The only operation or mode of treatment, that offers any hope for actually curing this condition, is its removal by some sort of a surgical procedure. At the present time there are three distinct methods of doing this.

The first method is Graham's cautery lobectomy. In this, after the lung has been found to be, or made to be, adherent to the costal pleura, the diseased area is burned out in stages with the cautery. Graham has had brilliant success with this method and has reported a consider-

able number of cases cured and others improved, with a mortality of about 20%, which is an exceedingly low mortality for this kind of surgery. The criticisms, that have been offered of this proceeding by other surgeons, are, first, that the operation is a very blind one. It is an entirely blind procedure to burn out a considerable area of the lung. Second, the danger of secondary hemorrhages seems to be a very real one. Graham, on the other hand, feels that this is not so, as, if the burned area of the lung is kept properly packed with gauze, he believes that this will control any hemorrhage that may take place, because the pressure in the pulmonary circulation is only one-sixth of the pressure in the general circulation. But it is only fair to remember that the pressure in the bronchial arteries is the same as the pressure in the general circulation. Our experience with this method has been a very small one, but it has been small because the results of some four or five cases were very disappointing. We do believe, however, that this is the ideal method of treating cases of chronic abscess, which are situated near the periphery of the lung in which drainage has been established, but show no signs of getting well and are beginning to have small hemorrhages.

The next technique is the amputation of the lobe of the lung inside the pleural cavity. Unfortunately this has been accompanied by a mortality that seems to us prohibitive, as in the hands of most surgeons who have done this operation, the mortality is about 100%. In Lillenthal's hands, who has done this operation more times than anybody else in this country, the mortality was 47% when his recent book was published. In our hands, at the Massachusetts General Hospital, the mortality has been close to 100%. We have performed this operation six times and only one case made a recovery. This case was operated on four or five years ago, recovered and is still living. It is interesting to note what the other cases died from, as there seems to have been considerable hard luck: one case, having made an uneventful convalescence, died suddenly on the sixteenth day after operation with a sudden hemorrhage; one case died six weeks after operation, having developed a brain abscess. The side operated upon had improved in a satisfactory manner. Another case died a few hours after transfusion and it is hard not to believe that the transfusion had a good deal to do with the death, as the operation had been an easy one, everything had gone well in it, but at that time all such cases were transfused on general principles, and following this the temperature suddenly rose to over 105° and the patient died in three or four hours after operation. Another case died five or six days after operation, and the cause of death was never determined, and one case died of

shock. It may be surprising, in view of these tragic results, that we persevered in this field of surgery, but in each instance the operation was undertaken only after much thought had been given not only to the patient, but to the method of doing the operation, and it was our hope that by changing the technique in some way, the operation could be safely performed.

About a year ago it occurred to us that it might be possible to perform this operation in an entirely different way. This technique very briefly consists of an operation that combines the partial collapsing down of the chest wall with the freeing up of the lobe of the lung, bringing as much as possible of it outside the pleural cavity, fastening it there and leaving it alone, allowing nature to complete the rest of the work. There is surprisingly little shock following this operation. Indeed the picture is entirely different from that following any other technique. At the end of about a week or ten days, the part of the lung that has been brought out of the pleural cavity has become necrotic and in the next ten days or two weeks gradually sloughs off; as this takes place the cough gradually ceases. At the end of about four weeks there may be seen in the bottom of the wound a bright, healthy, granulating stump of the lung, which has many discharging fistulae. In the cases that do well the wound gradually granulates in from the bottom, the fistulae gradually close and the wound heals.

We have only had four cases operated upon by this method, but the results are very different from those done by the other technique. The first case, done about a year ago, was a boy 17 or 18 years old, who made an easy and perfect convalescence, healed up entirely, has no cough and can return to his normal occupation in life. The second case was not quite so successful. It was a boy a year or two older than the first, who still has a little cough and raises a small amount of sputum, and still has a thoracic fistula, but his general condition is very good and I believe that the operation improved him very much. The third case was so successful and satisfactory that if all the other results

had been bad yet this one case would have proved the worth of this technique. He was a man 46 years old, thick build, short neck, prominent abdomen and a heavy drinker. His chart following the operation looked more like that of a chronic appendicitis case than of anything else, as for a day or two he had a temperature of 100° and then following that, during his entire convalescence, the chart was normal. This man did just as the first case did, in that finally he healed up completely, his cough disappeared and he is able to return to his work which is that of an expressman. The fourth case died. He was a boy 12 years old, who had been sick two or three years with this disease, and was a very feeble frail boy. It is probable that poor judgment was used in attempting to do this operation, except that it seemed that it was the only procedure that offered him any hope of ever becoming well. The side operated upon did very satisfactorily and just as well as any of the other cases, but about the eighth or ninth day after the operation, he developed pneumonia on the other side and died on the twelfth day.

Although the number of cases operated upon by this technique is very small, yet it seems fair to me to draw the following conclusions:

1. That it is possible to perform a lobectomy by this method.
2. That in our hands this operation has been followed by less shock than any other technique.
3. That two of the four cases have been cured and have returned to their normal occupations.
4. That the operative procedure may be completed in one stage, although it may be that a two-stage technique, doing an extrapleural thoracoplasty at the first operation, will prove to be safer.

At the present time it seems that a two-stage operation in which the chest wall is collapsed at the first stage, may tend to increase adhesions between the lung and the costal pleura, if they are present, or to cause them to form if they are not already formed, thereby making the second stage very much more difficult or, indeed, making it impossible.

THE CHIROPRACTOR AND INDUSTRIAL MEDICINE

BY DAVID H. GIBSON, M.D.

In industrial medicine it is generally conceded that the workman, in receiving treatment for injuries or disease, solicits the advice and care of a physician; and rarely does he employ the services of an osteopath or chiropractor. There is, however, the occasional workman who employs the services of an osteopath or chiropractor.

In cases that do not receive any benefits for lost time from illness it may be immaterial to the employer and the employee; but in industries where there are relief benefits, the employee's rights may be jeopardized by seeking the service of either an osteopath or chiropractor. The rules governing relief benefits furnished to the employee are written for his protection by

the industry; and the industrial physician is regulated by these same rules in his conduct and decisions.

In many large industries, the geographical distribution of the residences of employees extends to many states of the Union; that is, the working residence may be distinct from the legal residence. In the case of illness, many workmen return to their homes and families for treatment and medical service and this service is governed by the practice acts of the states where the illness originated. In some states, the osteopath and the chiropractor are licensed to practice; a fact that the industrial physician must bear in mind when his services involve an interstate relationship.

A specific case recently came to the attention of the writer, when an employee residing in another state was treated for a medical disease by a chiropractor duly registered in that state, the chiropractor furnishing the employee with a certificate to substantiate claim for relief benefits.

As Section 2, Article VI, of the Employees' Benefit Association states: "Sick benefit and disability from accident other than during the course of regular employment shall be paid as per Section 1, beginning with the eighth day, on production of satisfactory proof or medical certificate, for a period of thirteen weeks, but by special vote of the Board of Directors such time may be further extended two weeks for every twelve months employed by the Corporation, but shall not exceed twenty-one weeks in any twelve months,"—the question arose whether the certificate furnished by the chiropractor was a proper medical certificate.

The following letter was addressed to the State Board of Registration of Medicine, Concord, New Hampshire:

(COPY OF LETTER)

14 May 1926.

State Board of Registration of Medicine,
Concord, New Hampshire.

Gentlemen:

I am enclosing to you for your perusal, a certificate furnished to us by an employee who had been home ill since May 1st. He had been treated by Dr. James J. Burke with the enclosed diagnosis of influenza.

Will you kindly inform me if chiropractors are registered in your State, and under their registration license are they permitted to diagnose cases? This information has direct bearing upon our Employees' Benefit Association, which furnishes medical care upon the certificate of a registered physician. The question arises whether in your State, if in this case, a chiropractor is registered and permitted to diagnose a medical condition.

Thanking you for this information, I am

Very truly yours,

(Signed) DAVID H. GIBSON, M.D.

(COPY OF CERTIFICATE)

May 11th, 1926.

To whom it may concern:

This is to certify that Mr. Ambrose Comeau has been under my care with influenza from May 1st-May 11-1926 inclusive. He is now discharged able to return to work.

Very truly yours,

(Signed) DR. JAMES J. BURKE.

The following reply was received:

(COPY OF LETTER)

Concord, N. H., May 18, 1926.

David H. Gibson, M.D.,

Quincy, Massachusetts.

Dear Doctor:

I am enclosing, herewith, a copy of the chiropractor law.

I fail to see under the law how a chiropractor can any more than any other citizen qualify to sign such certificate.

They are not to be called "doctor" or "physician," but are licensed to do *One* specific thing for treatment of disease.

Very truly yours,

(Signed) CHARLES DUNCAN, M.D.

As Section 6, Chapter 150, an act to regulate the practice of chiropractic in the State of New Hampshire states:—"Any chiropractor who has received and holds a certificate of registration issued by said board may adjust by hand any articulations of the spinal column, but shall not prescribe for or administer to any person any medicine or drugs now or hereafter included in *materia medica*, practice major or minor surgery, obstetrics, or any branch of medicine or osteopathy;"—it was ruled that the certificate was not furnished by a duly licensed physician.

Sometime later the following letter was sent to the Secretary of the State Board of Health, the State of New Hampshire:

(COPY OF LETTER)

5 June 1926.

Charles Duncan, M.D.,
State Board of Health,
Concord, N. H.

Dear Doctor:

I have your letter of the 18th relative to my inquiry of the chiropractic law. I thank you for the copy of the same. I am enclosing you a copy of the certificate issued which is a violation of the chiropractor law. I do not know whether influenza is a reportable disease in your State, as it is in Massachusetts. I question, if you have not received a report and it is reportable, if this is not a violation of your laws also.

Very truly yours,

(Signed) DAVID H. GIBSON, M.D.

No reply was received to this last letter.

**Case Records
of the
Massachusetts General Hospital**

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY R. C. CABOT, M.D.

F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 13051

A PATIENT WITH HEMATEMESIS

MEDICAL DEPARTMENT

A Canadian housewife of forty-seven entered the hospital on August 3 with the story that twenty-four hours before admission, having previously been well, she had suddenly developed a sharp jabbing pain in the left lower quadrant, said to be in the same situation at which she had her menstrual pain, though of a different character. Periods, which were regular, still a week off. She felt nauseated and food seemed to gag her, so that all day she ate nothing but one small potato. The pain, which came and went every few seconds, lasted all day, getting progressively worse. Most of the day she lay down.

At midnight the pain had shifted suddenly to the midepigastrium. It became gnawing, sickening and continuous. At this time she vomited two large blood clots about the size of a hen's egg and later vomited blood several more times, in all about a pint. She fainted twice during the night, and on the day of admission still felt nauseated.

Family history. Nothing important.

Marital history. Husband living and well. No children. No miscarriages.

Past history. Mumps, measles and pertussis in childhood. Influenza in 1918. Tonsillitis and peritonsillar abscess three years ago. Following the peritonsillar abscess she had severe vomiting for nearly five weeks. No recurrence until the present illness. She was finally cured by very bitter powders of some sort. For the last eight years she had had sharp shooting pains in the arms and legs, "worse before a storm," said to have been rheumatism. Her teeth had all been removed six years before in an unsuccessful attempt to cure her "rheumatism."

Her appetite had been good. Her bowels required a daily cathartic. She had never been jaundiced or had clay colored or tarry stools. Her best and present weight was 110 pounds. There had been some palpitation and dyspnea on stair climbing for several years, and a continuous dry cough. Occasional night sweats.

Periods regular but somewhat painful. No leucorrhea.

Physical examination. A pale woman lying comfortably in bed. The skin was dry and clear. Sclerae were clear. Pupils equal and regular. Teeth absent. Tongue and throat negative. No superficial lymph nodes felt. Heart not enlarged. (Mid-clavicular line 7.5 centimeters, supracardiac dullness 4 centimeters, right border of dullness 3 centimeters, left border of dullness 6.5 centimeters.) Sounds normal quality, regular. No murmurs. Blood pressure 130/80. Lungs clear. Abdomen level, soft, tympanitic.

Note is made that complete physical examination was not done on account of undesirability of moving the patient and thus possibly increasing the hemorrhage.

Patient stayed in hospital twenty days. During that time temperature ranged from 98° to 99.3°. Pulse 85-100. Respiration 20. The urine showed the slightest possible trace of albumin on one occasion, none on two. No sugar in any. Sediment, leucocytes only. Blood, reds 4,600,000 at entrance, hemoglobin 70 per cent. Dropped to 2,900,000 and at discharge was 3,800,000 and 70 per cent. hemoglobin. Wassermann on blood was negative. First four stools black, with strongly positive guaiac. Next six showed negative guaiac.

She was at first given nothing by mouth, then put on Sippy's régime, and finally discharged on a six-meal bland diet with powders. Before she was discharged an X-ray was obtained. No definite evidence of organic disease of the stomach or duodenum was found. The six hour meal had reached the cecum.

The discharge diagnosis was, "Probable gastric ulcer with hemorrhage; secondary anemia;" but it is clear from the note that considerable doubt was felt about its accuracy.

The patient reentered December 21, fourteen months after her discharge. She said that she had followed discharge instructions carefully, but that a distressing burning pain in the epigastrium coming on about fifteen minutes after meals had continued and vomiting had occurred nearly every night, usually self-induced for relief. She stayed on her diet until seven months ago, when she began a general diet with only slight increase in symptoms.

Twenty-four hours before readmission she began to vomit profusely and continued to vomit what she described as coffee-ground-looking material. She had passed black stools ever since her first entry, due to bismuth.

Further questioning disclosed the fact that beginning nine years ago and for three years thereafter she was treated for a venereal infection with arm injections and back punctures. Since her last entry she had had fainting spells two or three times a month.

Physical examination. Moderately well-developed and nourished, mentally clear, in no pain. Pupils unequal and failed to react to light. Heart said to be slightly enlarged; measurements not given. Action rapid. Sounds of only fair quality. Lungs clear. Abdomen level, soft. No masses, tenderness or spasm. Viscera not felt. Knee-jerks and ankle-jerks absent. No edema. Rectal negative. Romberg suggestive. Urine not remarkable. Reds 4,200,000, hemoglobin 85 per cent., leucocytes 11,700. Wassermann on blood negative. Two guaiacs on stools strongly positive, one negative.

Spinal puncture. Clear colorless fluid. Dynamics normal. Alcohol positive. Ammonium sulphate positive. Cells, 52 lymphocytes. Wassermann strongly positive. Goldsol 5554332100.

X-ray. Esophagus normal. Stomach median position, normal in outline, freely movable. No filling defects. Duodenum normal. At six hour examination the stomach contained a trace of barium and the head of the meal was in the hepatic flexure. Cecum normal. No organic pathology in gastro-intestinal tract.

The patient stayed in the hospital until January 1. During this time the temperature was 98°-101°, the pulse 120-95, the respiration 20-25. It was found that she had some incontinence of urine and frequent lancinating pains in her extremities. The vomiting decreased, but even at the time of discharge she was still vomiting once or twice a day. In other respects she felt much improved, and at the end of her stay was retaining the greater portion of her food.

DISCUSSION

BY JAMES H. MEANS, M.D.

NOTES ON THE HISTORY

In other words, a middle-aged married woman comes into the hospital with very acute symptoms of a peculiar sort of pain, "jabbing" she says, in her left lower quadrant, and followed in a short time by hematemesis. She had had apparently in the past certain pains in her arms and legs, which it is interesting to note had been suspected to be rheumatism, possibly because of this story that they were worse before a storm, which is sometimes true of certain chronic arthritides. It is also interesting to note that removal of her teeth did not affect this, and it is perhaps interesting to note that this pain was described as "shooting."

This is by no means an easy problem to solve. It is clear that the woman had bleeding from her gastro-intestinal tract. Although we did not see the blood that she vomited, the fact that she had these tarry stools after coming in seems to make it certain that she truly did vomit blood. So that we are dealing with a sudden hematemesis in a woman of forty-seven, accompanied by some pain which is certainly not typical of ulcer.

It starts in a curious place, the left lower quadrant, and is not of the character that one expects in ulcer. It later shifted to the epigastrium and then became of a character that might be possible in ulcer but again is hardly to be called typical.

NOTES ON THE PHYSICAL EXAMINATION

The negative physical examination, the absolutely negative X-ray findings and the negative blood Wassermann are of a good deal of interest.

She apparently had lost blood enough to give her a fairish anemia. When she first came in she had four and a half million reds which dropped to 2,900,000, which represents a diluting process after a large hemorrhage, and then a moderate regeneration of blood during her stay in the hospital.

I think we might note that during the interval before readmission this patient did not behave as patients with peptic ulcer usually do. If they adhere to a rigid regimen for the most part, unless they have pretty definite stasis, they get relief. It would be rather queer, I think, to find that going back on a general diet did not aggravate the symptoms, which seems to be the case here. So that there are a number of things which make us doubtful of the diagnosis of ulcer. We should consider, of course, cirrhosis of the liver. That was considered, but there did not seem to be any etiology for that, and it was not thought likely that she had malignant disease.

The additional history obtained at the last entry is obviously extremely interesting. We of course got out our old record and looked to see what it said about the reaction of the pupils and knee-jerks, and were very much depressed to find that in a routine physical examination neither of those things had been checked. I cannot conceive of any house officer making a physical examination and failing to test the reactions of the pupils or the knee-jerks, and I think it is reasonably safe to assume that they were done and that they were negative. We have to note furthermore that on account of the hemorrhage it was not felt wise to make a complete physical examination. I think there is a moral connected with this, and that is that we do not make complete physical examinations on entry sometimes because of some acute condition, but that does not mean that we cannot make them later. Sometimes it never gets done.

It seemed to us on the basis of the last story that we were dealing with a case of tabes dorsalis without question, and we did a lumbar puncture. The goldsol is the typical parietic curve. So that we now have the complete picture of tabes dorsalis.

X-ray showed "no organic disease in the gastro-intestinal tract," which checks up with the previous X-ray.

I have no doubt that those so-called rheumatic pains that we had the story of were the pains of tabes.

DIFFERENTIAL DIAGNOSIS

I do not know that anything was missed when she came in the first time. It is entirely possible that her pupils and knee-jerks were normal although she had tabes. But it is extremely instructive that she should come back and have all or nearly all of the cardinal symptoms of tabes. We still have the bleeding from the stomach to explain, and I do not see how we can explain it on the basis of tabes. If she had vomited and vomited she might have retched up blood, but I do not see how she could have a profuse gastric hemorrhage. She not only had it the first time but she had it the second time. So that the diagnosis of tabes does not explain the hemorrhage so far as I know, and I would welcome help on this point.

I have two other cases that are very apropos. I had remembered that as a house officer I had had a patient something like this. Mr. D., aged twenty-nine, came in with a story of having had no symptoms of any sort until eleven months before entry. Then he began having epigastric pain definitely related to meals and at times attacks of vomiting lasting as long as a week. Altogether his story impressed us as being typical of ulcer. We did a Wassermann, which was negative. In his physical examination the only point was a localized tender spot two inches to the left of the umbilicus. His reflexes were normal, both pupils and knee jerks being mentioned. An X-ray was done which showed no evidence of disease in the stomach or duodenum. The stomach was low and there was some evidence of adhesions about the cecum, and it was also suggested by the radiologist that possibly he had a chronic appendix. There was no free hydrochloric acid in his fasting contents, but there was a normal amount in his test meal. There was no stasis by tube in this one examination.

He was put on a regimen of frequent feedings and a diagnosis of chronic peptic ulcer was made, and he was discharged. There in some respects we have a similar situation. He came in again a month later. Dr. Baggs made a note. "Well until a week ago on third-stage gastric ulcer diet. Two weeks ago back at work, seized with intense abdominal pain, character boring, duration eight hours, onset two hours after meals, repeated on two successive days. Much vomiting, nausea, and retching." He was transferred to the surgical side and a laparotomy done, and adhesions about the gall-bladder found, which were divided.

A month later he entered for the third time. He was feeling perfectly well until a week ago, and had reported for work. Before going on

his job, however, he tried to eat supper, but the vomiting recurred. He vomited everything for twenty-four hours. Three days before entry he vomited half a basinful of black fluid and felt something give way in his chest. The pain was now constant but not so severe.

On physical examination the pupils were regular, circular but reacted rather sluggishly. The abdomen was negative except for some retraction. No hernia. In the left lower quadrant was a non-tender mass which rolled beneath the finger, apparently a full colon. The knee-jerks were lively; no clonus or Babinski. He was vomiting continually. The stomach was washed out with no relief. Pain was not a conspicuous symptom; it was chiefly vomiting. Then he got worse and we had to give him some dextrose intravenously.

We had never found our ulcer and the gall-bladder and adhesions did not seem an adequate explanation for these symptoms, and operation had not helped them permanently. A lumbar puncture was done and ten cubic centimeters of clear fluid obtained, under no pressure. There was no clot on standing. Cell count 420, most of which were lymphocytes. Wassermann was reported strongly positive. So that this man also we concluded had cerebrospinal syphilis of some sort, with symptoms resembling peptic ulcer. He was given salvarsan intravenously, and salvarsanized serum. That was very new then. The discharge note says, "Feels perfectly well. To go out and return in ten days for further treatment."

Eleven days later he came for the fourth time. He had felt fairly well, but had had some vomiting and epigastric pain. He was given neosalvarsan intravenously and salvarsanized serum intraspinaly. After this he started vomiting again. Another blood Wassermann was negative, one on the spinal fluid moderately positive. In two days the vomiting had stopped.

Nine months later he wrote that since leaving the hospital he had been sick. He had had some pain in the stomach and had vomited several days. At present he was feeling very well indeed, and had had no pain or vomiting for five weeks.

Five months later he wrote that his general health was not very good. He had periods of vomiting every month or two. He had just gone to work.

Six months later he reported that he was still troubled with his stomach. He had been able to work only eight weeks since leaving the hospital. He now had the same symptoms as before operation. He had been sick in bed for over four months. *He had had a second operation in a hospital in his own town!*

DR. CABOT: Is there anything there about his ankle jerks? I have always remembered a case

in which Dr. Henry Baldwin spotted the disease. I had found negative knee-jerks.

DR. MEANS: The Achilles go first often. There is no mention of them here I am sorry to say.

We had a patient that entered recently with a slightly different situation,—a thirty-four-year-old fireman with a history of gnawing epigastric distress six to seven years ago. One and a half years ago, severe epigastric pain, not radiating, not relieved by food or soda. Noticed semi-anesthesia around the chest and upper abdomen, with a sensation of constriction. Exploratory operation was done a year ago at another hospital, at which the appendix was thought to have been removed and a gastro-enterostomy done. He stated that fluoroscopy at the hospital showed atony and ptosis, and that nine X-rays at the Veterans' Bureau showed no ulcer.

Our examination showed fixed, irregular and unequal pupils, knee-jerks absent, a suggestive Romberg, a negative blood Wassermann, a strongly positive spinal fluid Wassermann, positive protein test, 89 cells, all lymphocytes. It seemed obvious to us that he had *tabes dorsalis*.

One might say, thinking of the other two cases, that here was an instance where surgery had been done on a tabetic. But the surgeon who did this was one of our staff and he tells us that at operation he really found an ulcer. Which shows us that a tabetic may have ulcer. He may have two diseases.

These cases show how protean *tabes* may be, and that we may have other diseases with *tabes*.

DIAGNOSIS

Tabes dorsalis.

Gastric crisis.

Hematemesis of unknown origin.

CASE 13052

OBSTRUCTION OR PERITONITIS?

SURGICAL DEPARTMENT

A Nova Scotian widow of seventy entered the hospital May 4.

Fifty-eight hours before admission she was seized with sudden severe generalized abdominal cramps which continued in paroxysmal attacks with remissions until the time of admission. Her abdomen enlarged until it became quite distended. Moving was painful, therefore she lay quietly on her back. She had slight nausea. Her bowels had not moved for seventy-two hours. She usually passed a good deal of gas by rectum. Since the onset of the illness she had passed none, but had belched a little. She had felt weak. In the past three days she had eaten one soda biscuit and had taken a glass of milk. Before coming to the hospital she

drank large quantities of milk. She was now very thirsty.

For eleven years she had not felt strong. For ten years she had had some dyspnea on exertion. She had lost some weight. Eight years before admission she had influenza. Nineteen months before admission her right breast was removed for a fist-sized movable rapidly growing tumor. There were axillary glands. She had had a corneal opacity of the right eye for twenty years.

One brother died of pulmonary tuberculosis. The family history was not otherwise significant.

Examination showed her to be well developed and fairly well nourished. The skin and mucous membranes were dry. The entire right chest showed diminished resonance, diminished respiratory excursion and diminished breath sounds. There was the scar from the amputation of the right breast. The heart sounds were of poor quality. No measurements are recorded. No enlargement and no murmurs were made out. There was generalized abdominal tenderness, greater in the lower half. The abdomen was distended and tympanitic. There was a small umbilical hernia and a large inguinal hernia on the right. There was dullness to flatness in the flanks, with fluid wave. Pelvic examination was negative. There was a scar on the right cornea. The pupils were fixed. The knee jerks were absent.

There was no record of the urine. Blood examination showed 11,000 to 7,200 leucocytes, probably 96 per cent. of which were young polymorphonuclears, very large, with a large amount of cytoplasm; many had only one kidney shaped nucleus, but it was doubtful that they were large mononuclears; only 4 per cent. were lymphocytes. Hemoglobin 80 per cent., reds 4,992,000, reds and platelets normal.

X-ray examination with a barium enema showed a large amount of gas in the colon. The examiner wished to re-ray the colon after further preparation. A plate of the chest showed the mediastinal shadow apparently increased in width, irregular on the right, probably exaggerated by rotation of the patient. The transverse portion of the aorta was slightly prominent to the left, suggesting some tortuosity. The diaphragm was rather flat on the right, the costophrenic angle clear. There was slight limitation of motion on both sides. The proximal long bones and the lower portion of the pelvis showed no definite pathology.

The temperature was 102.8° to 99.3°, the pulse 99 to 109, the respiration 25 to 29.

The morning after admission there was marked distension relieved by an enema, and some tenderness. The patient continued in the same condition until evening, when she went into collapse. A subpectoral and stimulants served to arouse her somewhat. The pulse how-

ever remained weak and stupor continued. The morning of May 6 she was very stuporous, went into collapse and died.

DISCUSSION

BY EDWARD P. RICHARDSON, M.D.

This onset of sudden pain, paroxysmal in character, with remissions, and distension of the abdomen, and the fact that she has passed no gas, would bring up a suggestion of intestinal obstruction. We should suppose that accompanying these symptoms there would be vomiting, but nothing is said about vomiting, and in fact she had retained something. So that the history points towards obstruction, possibly at her age due to carcinoma, of the large intestine. That in a small proportion of cases produces no symptoms until the sudden development of complete obstruction.

The family history is not significant.

We lose in her past history any story of digestive disturbance, which is not mentioned. There is no mention of abnormal discharges such as the passage of blood and mucus, and no story with regard to her weight. All of those would be important points.

There was apparently no evidence of local metastasis, because such is not mentioned. Examination of the herniae should be made very carefully for the question of reducibility. As there is no mention of any strangulation we have to exclude those herniae as the cause of symptoms.

The interpretation of the lung and blood examination I will leave to the medical men present.

The long bones, I suppose, were X-rayed for metastases, also the chest for metastases from the breast, and it seems to me that the findings were not conclusive of any metastases in the thorax.

That physical examination might bear out a diagnosis of intestinal obstruction. The generalized abdominal tenderness in the lower half may be associated with obstruction, but points rather to an inflammatory process inside the peritoneum. In addition the temperature points to an inflammatory process. The fact that distension was relieved by an enema rather points against obstruction, although carcinomatous obstruction of the large bowel might let up as a result of rest. Here again we do not have any story of vomiting.

In view of this whole history we have a possible source of metastasis in a probable carcinoma of the breast. That might involve the intestines and lead to intestinal obstruction. Aside from that we should have to consider the question of obstruction and the question of peritonitis, and the separation of those two things

is not always simple. We have in peritonitis a reflex paralysis of the intestinal tract early, and late a paralytic obstruction with marked distension. The examination of the colon by barium enema was not sufficient to exclude an obstruction of the large bowel. My own feeling about this case would be that she had a peritonitis, that her obstructive symptoms were due to the secondary effects of the peritonitis on the intestinal tract. The source of the peritonitis is not clear. On account of the sudden onset we might suppose that it was due to a perforative lesion somewhere in the gastro-intestinal tract. And I should make the diagnosis of peritonitis of uncertain origin, probably not connected with the carcinoma of the breast and probably not due to a carcinomatous lesion anywhere in the intestinal tract, although that might be the cause. In some carcinomas of the stomach and some of the intestine, but in very exceptional cases, we have an actual perforation due to necrosis of the carcinomatous tissue.

In regard to treatment, looking back, was operative treatment indicated? I think in view of her condition when she came in it was proper to observe her further and attempt to make a more accurate diagnosis, to restore fluid, and then if she showed improvement to operate upon her. If she had at the time of entrance a diffuse peritonitis I think very little could have been accomplished by operation anyway. In elderly people a general peritonitis does not produce the characteristic signs on physical examination that it does in younger persons. The abdominal wall is perhaps lax, therefore the amount of muscular rigidity is very much less. I think that is a deceptive point. I think in women with a very relaxed abdomen following childbirth we are perhaps influenced by the absence of board-like rigidity in arguing against peritonitis. But it is not possible for such an abdomen to have a board-like rigidity. So in elderly people the local signs of peritonitis are not clear-cut, and the constitutional evidences may not be present. In them it is a more difficult diagnosis.

DR. CABOT: I do not believe that the signs in the chest or in the blood have anything to do with the case. That blood report I believe is due to a bad stain or an ignorant examiner. I think there ought not to be any difficulty in telling lymphocytes from polynuclears. Of course if they were all lymphocytes we should have to think of the possibility of an intestinal lymphoma. In the chest adhesions, perhaps an old pleurisy, would explain the signs. I have an idea that after extensive operations for cancer of the breast that chest is apt to be a little more dull.

DR. JAMES H. MEANS: I should think that diminished respiratory excursion and diminished breath sounds were perhaps due to the

fact that the diaphragm is paralyzed on that side. The diaphragm should be higher on the right. The note is that the right is flat and they are both limited in excursion.

A PHYSICIAN: Is it possible that the hernia was the cause of the obstruction?

DR. RICHARDSON: Yes, I think it is possible. But ordinarily in strangulated hernia we palpate a mass which is tense and somewhat painful. Sometimes in fat women a strangulated inguinal hernia can be overlooked or considered an inguinal node. But here nothing of the sort is described. I should agree with you that we ought to know something more about the character of those herniae.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Peritonitis.

Intestinal obstruction.

DR. EDWARD P. RICHARDSON'S DIAGNOSIS

General peritonitis of uncertain origin.

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesions*

Ulcers of the duodenum, with perforation of one of them.

2. *Secondary or terminal lesions*

General fibrinopurulent peritonitis.

Slight hydrothorax.

Arteriosclerosis.

Hypertrophy and dilation of the heart.

Edema of the lungs.

3. *Historical landmarks*

Chronic pleuritis.

Umbilical and right inguinal herniae.

Slightly defective closure of the foramen oval.

DR. MALLORY: At necropsy the scar of the old mammectomy was found. There was no evidence of recurrence in or beneath the scar.

The peritoneal cavity was found to contain 500 cubic centimeters of thin purulent fluid, and there was a large collection of pus over the right lobe of the liver. This extended downward along the suspensory ligament to a point on the duodenum where there was a perforated ulcer. There were two ulcers in the case, one about an inch and a half beyond the pylorus on the posterior wall of the duodenum, lying just above the head of the pancreas, and the other only half a centimeter below the pylorus on the anterior wall. On the peritoneal aspect of this latter ulcer there was considerable fibrinopurulent material.

The pleural cavities showed about 300 cubic centimeters of clear fluid on each side. The lungs were entirely negative.

The heart was considerably hypertrophied.—

470 grams. The valves showed a slight degree of sclerosis. The cavities and coronary arteries were negative. There was very marked sclerosis with a very much widened arch of the aorta, and also considerable widening of the abdominal aorta.

The kidneys were somewhat small, about 200 grams, but the capsules stripped readily and the cortex averaged five millimeters. So that they were essentially normal for a woman of her age.

DR. RICHARDSON: The essential lesion was a fibrinopurulent peritonitis, but there was pus in the right pleural cavity?

DR. MALLORY: No, there was just clear fluid there.

DR. RICHARDSON: And nothing to account for any changes in the thorax?

DR. MALLORY: No, unless it is the hypertrophy of the heart. Still, I doubt that. She did not have congestion of the liver. I do not believe heart failure was the cause of the hydrothorax unless it was an acute terminal affair.

DR. CABOT: She had some pleural adhesions, didn't she?

DR. MALLORY: Yes, on each side at the apex.

DR. CABOT: Awfully hard luck to go to her seventieth year and die of a perforating ulcer.

DR. RICHARDSON: I don't think anything could have been accomplished if the diagnosis had been known.

A PHYSICIAN: Was there any story of digestive distress?

DR. RICHARDSON: Absence of a history of digestive distress is not unusual with an acute perforation of a duodenal ulcer. I think it would be found that twenty-five or thirty per cent. had perforation without previous symptoms of sufficient definiteness to be recorded in an emergency history.

CASE 13053

TB. OR NOT TB.?

UROLOGICAL DEPARTMENT

An American clerk fifty-two years old entered May 12 complaining of pain in the scrotum and the right lower quadrant.

Two years before admission he began to urinate every 10-15 minutes by day with terminal hematuria, and 20-30 times at night. A physician found an abscess in the scrotum. This opened itself and drained for a year. The condition did not change until two weeks before admission. Then he began to have severe pain on micturition, and the urine was blood streaked. He felt as if there was a stone in his urethra, and he could not force the urine past it. He now urinated every ten minutes by day and every fifteen by night. The urine was thick and heavy with mucus. He passed considerable gravel. He thought he had lost fifteen pounds

during the past month. At admission he had constant severe pain in the scrotum and passed blood streaked urine almost continually.

His family history was good. His past history was negative except for constipation for the past twenty-five years.

Examination was negative except for a somewhat yellow sallowness, a right inguinal hernia, and an enlarged, hard, tender left lobe of the prostate. Both vesicles were large and hard. There was marked tenderness over the bladder area.

Before the operation the amount of urine was 60 to 100 ounces, red or cloudy, alkaline, specific gravity 1.012-1.018, 6-8 leucocytes and 4-6 red blood corpuscles at one of three sediment examinations. Sediment of a catheter specimen showed blood and pus. No tubercle bacilli were found, but many diplococci resembling pneumococci, large bacilli in chains, cocci in clumps and chains. Renal function May 16 65 per cent., June 10 25 per cent. (1000 cubic centimeters dilution.) No Wassermann test is recorded. Non-protein nitrogen 25 milligrams May 12, 42 milligrams June 16, 110 milligrams June 22. Uric acid 4 milligrams.

X-ray at admission showed an irregular shadow on the left side overlying the lower pole of the kidney, possibly a stone. There was calcification in the costal cartilages, also a small round shadow just below the spine of the ischium on the right, probably a phlebolith. The outline of the right kidney seemed rather large. The left was not visible.

May 13 cystoscopy was done. The patient was put upon constant drainage, and became more comfortable, with less blood in the urine. By May 21 the drainage was quite good. The urine was clear and acid. There was no bladder capacity. Cystoscopic examinations were done May 22 and June 4. He had a good deal of trouble with the catheter. X-ray showed a large right kidney and a small left kidney with areas of calcification in it. May 28 he was taken off constant drainage.

June 9 operation was done. June 17 there was so much distension that the outlines of the stomach could be seen. The blood pressure was 115/95, the pulse 130. The stomach was washed out with a Levine tube, but not much material was recovered. He continued in a very low condition. June 22 the blood pressure was 74/50, the respiration 35. Abdominal distension was marked. He had been given suppositories of glucose, enemas, turpentine stupes, digitalis, rectal tube, etc., with no relief. The non-protein nitrogen was 110. June 24 there was some improvement in circulation, but the distension persisted in spite of all treatment. He failed rapidly. Purpuric spots appeared on the left forearm and chest. June 30 he died.

DISCUSSION

BY EDWARD L. YOUNG, JR., M.D.

"This opened itself and drained for a year." These two statements alone are enough to make us so strongly suspicious of tuberculosis that the burden of proof comes on anyone who says it is not. Because that amount of bladder irritability in the first place, with a scrotal abscess which has broken of itself and drained for a year, is almost enough to clinch the diagnosis. Fifty-two is older than the average onset of urinary or genital tuberculosis, but it can come on not only at fifty but at seventy or older. I know of no other scrotal abscess which will behave in this way. The differential diagnosis in epididymal tuberculosis lies between that and syphilis and neoplasm. The other infections of the epididymis are without exception not chronic, that is, gonorrhea and colon bacillus and the rare pus-forming organisms. They are all rapid in their onset and in their decline.

Tenderness over the bladder area also goes with tuberculosis. In genital tuberculosis the seminal vesicles are always affected and late in the disease are hard and palpable, as these were. A malignant condition there would show a hard nodular prostate and vesicles, but not tender.

A renal function of sixty-five per cent. is important if true. I should want it checked up before I entirely believed it, because it is normal. Twenty-five is beginning to show a diminution.

Forty-two is normal non-protein nitrogen and 110 is high.

Dr. Camp, will you speak of the X-ray plates?

DR. JOHN D. CAMP: The shadow referred to is not exactly typical of a kidney stone. It is within the kidney area, however, and I think we must rule out stone. The left kidney is definitely smaller than the right. The lower shadow I think undoubtedly represents a phlebolith. It is below the uretero-vesical junction I think.

DR. YOUNG: A good rule of thumb is to draw a line below the ischial spine. Anything below that is too low.

The thing I should like to say with regard to that picture is that the irregular shadow of that type should always be regarded with suspicion as being due to calcification in a tuberculous abscess. I have twice seen a tuberculous kidney opened for stone on the basis of such a shadow, and a tuberculous sinus which never heals is a very disconcerting and, when one has gone in for a stone, a very embarrassing situation. The X-ray fits with the picture given here of probable tuberculosis.

Cystoscopy in a tuberculous bladder can only be done under an anesthetic, as a rule, and if the irritability is as great as it is here the bladder capacity may be practically nil. If the tuberculosis is such that the bladder wall is badly

involved, kidney function may not be determined and cystoscopy may give very little information. Before that I should make a diagnosis of probable urinary and genital tuberculosis. It does not seem fair to consider seriously any other diagnosis. A rather alkaline encrusted cystitis can give this picture, but in that case the bladder area will generally show enough of the calcified material along the wall so that X-ray will give at least a suspicion of the trouble. I think it is hard to fit it in with tumor. I have no other diagnoses to make that seem to me consistent with this picture. That is, in spite of not finding tubercle bacilli in the urine, which I think is due to the fact of a mixed infection.

DR. YOUNG'S PRELIMINARY DIAGNOSIS

Probable urinary and genital tuberculosis.

PRELIMINARY DIAGNOSIS

Tuberculosis?

CYSTOSCOPY MAY 13

Novocain. The cystoscope was introduced easily, but the distension of the bladder caused such pain that gas had to be given. Under gas the bladder held about two ounces. There was slight bleeding. Inspection of the bladder showed a loss of all landmarks. The ureters were not seen. The bladder wall was covered with a membrane of grayish white appearance. The urine was typical of carcinoma, but the picture was more indicative of tuberculosis.

FURTHER DISCUSSION

Two ounces is very little.

This account bears out the picture we have outlined so far.

DR. YOUNG'S PRELIMINARY DIAGNOSIS

Urinary and genital tuberculosis.

PRELIMINARY DIAGNOSIS

Renal tuberculosis.

CYSTOSCOPY MAY 22

All landmarks of bladder gone. Ureters could not be distinguished. 10 cubic centimeters of 10 per cent. indigo carmine put into vein, but no color appeared for half an hour.

CYSTOSCOPY JUNE 4

Gas-oxygen and ether. Good view of the bladder. Both ureters seen as round, retracted holes. The catheter would not enter the left ureter more than one centimeter. It passed up the right ureter to the kidney. There was seen to be a definite bar at the bladder neck on the prostatic side of which there was a deep cavity

as if from a previous prostatic abscess. 10 cubic centimeters of 4 per cent. methylene blue injected intravenously did not appear in good concentration.

FURTHER DISCUSSION

This is not consistent with our red test. That red test is very good—suspiciously high—and ten per cent. indigo carmine ought to appear from the good kidney in considerably less than half an hour.

They did not get a function of phenolsulphonephthalein on the right side.

From the evidence that we have here it seems to me that the left kidney must be considered a tuberculous kidney, and unless they have more evidence than we have given us I should assume they did a left nephrectomy.

DR. CABOT: What do you think about the right kidney at this stage of the game?

DR. YOUNG: If there is any truth in that sixty-five per cent., if that is not more than twice what it should be, and the non-protein nitrogen is correct it seems to me that the other kidney must be doing good enough work. I do not see why they did not collect the urine from the right side, because in the absence of pus I should take out the left kidney regardless of any further information about the right.

PRE-OPERATIVE DIAGNOSIS

Tuberculosis of the urinary tract, median bar.

OPERATION JUNE 9

Through a median suprapubic incision the urinary bladder was exposed, the peritoneum was reflected from the anterior surface and a median incision made in the wall of the bladder. The bladder wall was thick and the bladder very much contracted. On examination of the prostate it was found to contain a large abscess. By means of the actual cautery the prostatic bar which was found to exist was burned away and the contents of the prostatic abscess evacuated. A ureteral catheter was inserted into the right kidney, but the left ureter was found to be occluded and would not carry a catheter.

PATHOLOGICAL REPORT

A small fragment showing on microscopic examination a tissue too necrotic for diagnosis.

FURTHER DISCUSSION

They want some more information. I am going faster than they went.

There are two other X-rays given, and I assume that the catheter was left in the right kidney, and two days later a pyelogram was done. To me it looks like a pretty good kidney. The pelvis is a little bit dilated perhaps, but very

little. The ureter is a little dilated. But the calices are not dilated and could be seen in good shape.

The best bet seems to me that some of that sepsis got through into the retroperitoneal tissue. That distension could be due to reflex from renal damage, and that amount of abdominal distension sometimes is due to such a reflex. But it does not seem to me that that pyelogram alone ought to put the right kidney out of commission. However, with the non-protein nitrogen going up there certainly has been marked damage there.

I think Dr. Richardson will tell us that there is tuberculosis of the left kidney with calcified abscesses and occlusion of the ureter, and that the right kidney is a fairly good kidney. I do not think we have any evidence to say whether it is infected or not. There is tuberculosis of the genital tract. It is pretty late for him to have died of sepsis spreading from this. I think I will say there will not be any sepsis in the peritoneal cavity. Where else there may be tuberculosis I do not know, but most cases have tuberculosis elsewhere in the body.

DR. RICHARDSON: What is the bacteriology in the urine?

DR. YOUNG: They say there was no evidence of tubercle bacilli. There is no evidence that they put it into a pig. Clinically it is a tuberculous picture.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Pyonephrosis.
Uremia.
Suprapubic cystostomy.
Fulguration of abscess in prostate.

DR. EDWARD L. YOUNG'S DIAGNOSIS

Tuberculosis of the left kidney.
Genital tuberculosis.
Renal insufficiency.

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesion*

Pyonephrosis.

2. *Secondary or terminal lesions*

Abscesses of the prostate.
Diphtheritic cystitis.
Suppurative nephritis.
Hemorrhagic edema of the lungs.

3. *Historical landmarks*

Polyps of the stomach.
Chronic tuberculosis of bronchial and tracheal glands.
Chronic pleuritis, right.

DR. RICHARDSON: The head was not examined. Trunk. The abdomen was rather hollow, the

wall soft. The peritoneal cavity, appendix, and gastro-intestinal tract were negative. The mesenteric glands were negative, but the retroperitoneal glands along the aorta and iliacs were slightly enlarged, and pieces were taken. They showed no evidence of tuberculosis microscopically. There were a few old pleural adhesions on the right side, on the left none. The bronchial glands were slightly enlarged and one of them showed small areas of old tuberculosis. One gland along the trachea was enlarged 2 by 3 centimeters and consisted of fibrocaseous material, old tuberculosis. The apices of the lungs were negative. The tissue generally showed hemorrhagic edema, best marked in the lower lobes.

The pericardium was negative. The heart weighed 318 grams, with negative valves and cavities. The myocardium was rather flabby and pale and the coronaries showed a slight amount of fibrous and fibrocalcereous sclerosis scattered along the walls, with but slight diminution of the lumen. The aorta showed only a slight amount of arteriosclerosis, and the great branches were negative.

The liver, gall-bladder, pancreas, spleen and adrenals were frankly negative.

So far the only evidence of tuberculosis we have is the chronic tuberculosis in the bronchial and tracheal glands. There was no tuberculosis in the mesenteric or retroperitoneal glands.

The right kidney weighed 425 grams,—much enlarged. The capsule came off but showed slight adhesions here and there, leaving a surface dotted over with minute grayish-yellow abscesses. The tissue was swollen, wet, and showed scattered through it purulent points and minute areas similar to those on the surface. Some of these were in the region of the apices of the pyramids. The cortex was wide, 6 to 8 millimeters, and the pelvis moderately dilated and contained fibrinopurulent material. The mucosa was thickened, dirty grayish-red, granular, and coated with somewhat shaggy grayish-yellow fibrinopurulent material. The ureter was enlarged, with thickened walls and more or less choked with material similar to that in the pelvis. This ureter opened freely into the bladder.

The left kidney weighed fifty-two grams—very small,—the capsule adherent, the surface pale and showing irregular mounds which on section proved to be dilated calices with thin roofs of atrophic kidney tissue. These calices contained much purulent material, and a layer of this material coated their inner surfaces and the mucosa of the pelvis. The pelvis was small and contained some purulent material. The ureter was a thick walled tube with practical obliteration of its lumen. A very fine probe could be passed with difficulty through the ureteral opening in the bladder wall. The blad-

der wall was thickened, the mucosa dirty grayish-red and coated with fibrinopurulent material.

The bladder wall presented the operation wound mentioned.

The prostate presented as a thick, fibrous shell of prostatic tissue surrounding cavities the inner surfaces of which were coated with shaggy fibrinopurulent material. The testes were negative.

This is a picture the gross anatomy of which shows a hypertrophied kidney on one side, atrophied on the other, with abscesses scattered through the kidney on the right side and on the left side a chronic infectious condition with purulent material still present.

The sections taken from the various places were negative for tuberculosis and the lymph nodes were negative for tuberculosis, except in the bronchial region. There is something to be said for the point of view that the left kidney might be tuberculous.

DR. YOUNG: I think those ureters are very characteristic of tuberculosis,—that taken with the picture as a whole.

DR. RICHARDSON: It is too bad that they did not inoculate a pig. There are times of course when the differential diagnosis between these two conditions is very difficult, and sometimes these chronic infectious conditions show considerable resemblance to tuberculous ones. The microscopic examination however was perfectly definite, and the statement is that in none of the sections were tuberculous lesions found.

DR. YOUNG: I know of no condition which will give that picture of a rupturing abscess draining for a year and the thickened ureters. All other infections of the tract, however chronic, do not give a thickened porky ureter.

DR. LINCOLN DAVIS: I do not recall whether they said there was dilatation of the pelvis of the ureter?

DR. YOUNG: There was a little on the right but none on the left, but they were both thickened.

DR. DAVIS: It was not pyonephrosis?

DR. RICHARDSON: Yes, to a certain extent. There was pus in the pelvic cavities.

DR. YOUNG: Every now and then I think such a case as this has been reported. The sections come back negative.

DR. CABOT: That condition of the right kidney is comparatively recent, isn't it?

DR. RICHARDSON: Yes.

DR. CABOT: Do you think that might have come in the few weeks since operation?

DR. RICHARDSON: Yes, that on the right. The ureter was enlarged, and the wall thickened, but it may become so with a perfectly definite pathway of ureteritis coming up from a prostate which showed an abscess. In the first place it was known that the abscess of the pros-

tate was there and they could not find any tubercle bacilli, but it did contain organisms which could and apparently did produce the condition in the right kidney. But of course it is perfectly clear that the kidney on the left side was a chronic condition as compared with the one on the right.

A PHYSICIAN: There is no statement of the appearance of the bladder on cystoscopy?

DR. YOUNG: Yes. The ureteral orifices were apparently tuberculous. In the first two examinations they did not see them at all. There was a universal shaggy appearance that goes with a chronically contracted, infected bladder. Then when they cleared up they could see both openings and said they were of the "golf hole" type, which is again characteristic of tuberculosis.

NOTE ON CASE 13021

I am sorry that I was mistaken in attributing to Dr. Paul D. White an opinion favorable to the use of digitalis in pneumonia. (BOSTON MEDICAL AND SURGICAL JOURNAL of January 13, 1927, page 61.) Dr. White writes me that "this is one of the therapeutic measures that I have rather strongly combatted for the past ten years."

RICHARD C. CABOT.

IODIZED SALT AND THE PREVENTION OF GOITRE

In Switzerland the administration of iodized salt has proved very useful in the prophylaxis of goitre, and some good results of its adoption in Germany have now been described by Dr. Sepp, a medical man residing in a goitre district in Upper Bavaria. He found that in the local sick club the sick-rate from all causes was little affected by the use of iodine, varying only from 286 to 234 cases a month, but the figures for goitre showed considerable reduction. In the period between the first quarter of 1923 and the third quarter of 1924, 320 of 1789 patients suffered from goitre, whilst in the period between the fourth quarter of 1924 (when salt was first introduced) and the second quarter of 1926 only 87 of 1743 patients had goitre. The constant decrease is indicated by the fact that in the last quarter of 1923 22.6 per cent. of all the club patients suffered from goitre, whereas this percentage had fallen in the last quarter of 1924 to 7.2 and in the second quarter of 1926 to 3. No case of thyroidism occurred in club patients, as they did not take more iodine than the doses supplied to them, but a number of cases were observed in private practice where patients had, at their own expense, indiscriminately swallowed larger doses of the compound.—*London Lancet*.

SQUIRREL HEAD EXAMINED FOR RABIES

On November 26 the Laboratories received the head of a squirrel for examination for rabies. No Negri bodies were found in the specimen but the animal was reported as acting queerly and it had bitten a child. So far as any of the present laboratory workers are aware, this is the first time the brain of a squirrel has been examined for rabies infection in Connecticut.—*Bulletin of the Connecticut Department of Health*.

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THE USES OF ADVERSITY

SUCCESS is to man an ever receding goal, and by his own measurement too seldom attained. In the eyes of others he may have succeeded, envially succeeded, but to himself the attainment of today has no longer the value of yesterday. His goals are shifting, his values changing, and his horizon broadening. The spirit of unrest is upon him while larger rewards are still visible and he must keep his nose to the grindstone, his foot on the treadmill so long as ambition draws from before and necessity pushes from behind.

The man with wordly ideals is never satisfied, for in their very nature material rewards are sawdust to the soul in place of sustenance, and every peak surmounted has the disadvantage of affording a better view of higher mountains still unclimbed. We are like Till Owlglass in the old fable who groaned mightily as he descended every hill, because of the upward slope ahead, but climbed each hill merrily, thinking each might be the last.

Striving for what we think we want, hurrying into places where we believe we will be more enviable to our fellows, or more respected by them, we have joined a traffic stream in which any

loitering is unthinkable and he who stops believes himself to be lost. And yet, despite the onward urge which permits of no slackening of pace or glancing to the right or left, there may be beauty in the scenery on either side which only the puncturing of a tire or the failure of an engine allows us to become conscious of.

Happy may be that man who, in the midst of the struggle to keep up the ever increasing pace, to climb each succeeding hill and reach each near or distant goal, is overtaken by some turn of fortune, even if it be illness, which may compel a pause. Look not upon it as a misfortune of necessity, for it may be a blessing in disguise; an opportunity to be seized upon. Now you may read those books you have not had time to turn to and cultivate the friendships the true worth of which you had not realized. Now is the time to dally with the art of correspondence, perhaps to develop an avocation which will stand you in good stead again. Better still you may avail yourself of the opportunity to discover or strengthen a philosophy of living which will make you better in your work, when you take it up again, more unselfish in your dealings with others, better able to evaluate properly the difference between living for the future only and living in the present but for the present and future both.

Trudeau spent much of his later life upon a sick bed, Darwin was a chronic invalid, Milton was blinded with much of his life work yet undone, and each derived added strength from his weakness. If he but knew it and would use it, every man has the power of that legendary opponent of Theseus who arose with strength increased sevenfold each time he was dashed to earth.

Carry a message to the sickroom to be administered with your pills, only with greater faith; practice a philosophy as well as medicine and yours will be a success which even you will recognize.

THIS WEEK'S ISSUE

CONTAINS articles by the following authors:

FALLON, MICHAEL F., LL.D., M.D. Harvard Medical School 1887; F.A.C.S.; Surgeon in Chief Staff of St. Vincent's Hospital, Worcester, Mass. The title of his article is: "Observations Based on Eleven Hundred Operations for Gall Bladder Diseases." Page 171. His address is 390 Main Street, Worcester, Mass.

WHITTEMORE, WYMAN, S.B.; M.D. Harvard Medical School 1905; F.A.C.S.; Instructor in Surgery Harvard Medical School; Assistant Visiting Surgeon, Massachusetts General Hospital; Fellow American Surgical Association; American Association for Thoracic Surgery and Member New England Surgical Society. His subject is: "The Treatment of Chronic Bron-

chieftasis." Page 182. His address is 199 Beacon Street, Boston.

GIBSON, DAVID H., M.D. Tufts College Medical School 1921; Assistant Surgeon Fore River Plant Bethlehem Shipbuilding Corporation; Member Cambridge Medical Improvement Society and the Massachusetts Medical Society. His subject is: "The Chiropractor and Industrial Medicine." Page 184. Address: 76 Reservoir Street, Cambridge, Mass.

LEGISLATIVE NOTES

So much of the Governor's message as relates to the Board of Registration being given discretionary powers to pass upon the qualification of Medical Schools will be the basis of a hearing before the Committee on Public Health, Room 446, February 21.

This is especially important and all proper influence should be used to enable the Board to raise the qualifications of those doctors who wish to practice in Massachusetts. Under the present law any graduate of a medical school which in general terms gives a four years course may apply. Further penalties to apply to illegal practice of medicine will be heard on the same date.

On February 14, the bill H. 321 to protect the public against typhoid carriers will be heard.

S. 125 relative to the disposal of garbage, etc., is assigned for February 7.

H. 204 relative to the vaccination of pupils in private schools is assigned for February 28.

H. 320 relative to reporting cases of cancer for February 7.

H. 623 relative to extermination of mosquitoes for February 9.

H. 799 Petition of James L. Smith for the revocation of the charters of the College of Physicians and Surgeons and the Middlesex College of Medicine and Surgery. Not assigned.

House bill 58, providing for the appointment of an investigator to act under the Board of Registration in Medicine has been given leave to withdraw.

MISCELLANY

DIPHTHERIA ON THE TOBOGGAN

Now that the sliding days of winter have come it may be appropriate to speak of diphtheria as "sliding" down hill in prevalence. Figures just made public by the State Department of Health indicate that in 1926 only 1240 cases of diphtheria were reported in Connecticut. This represents a rate of less than 80 cases per 100,000 population, which is the lowest rate on record for the state. The cases reported together with the case rates (Number of cases per

100,000 population) for the past 10 years are given in the following table:

Year	Cases	Case Rate*	Year	Cases	Case Rate*
1917	2367	174.7	1922	2924	202.0
1918	2348	166.6	1923	2427	164.5
1919	3388	231.4	1924	2110	140.4
1920	3754	269.4	1925	1712	111.9
1921	3361	236.6	1926	1240	79.5

*Cases per 100,000 population.

For the 30 year period, 1895 to 1924, the diphtheria cases and case rates, averaged for five-year periods, are shown in the following table:

1-Year Period	Total Cases	Average Cases	Average Rate*
1895-1899	7112	1422	162.9
1900-1904	7581	1516	161.5
1905-1909	8722	1744	170.5
1910-1914	11738	2347	202.7
1915-1919	12134	2426	178.3
1920-1924	14576	2915	201.3

*Average cases per year per 100,000 population.

A comparison of figures in the foregoing tables will show a marked reduction in the incidence of diphtheria during the past three or four years. In fact the case rate of 79.5 for 1926 represents less than half the average prevalence for the 30-year period covered by the second table.

TOXIN-ANTITOXIN IMMUNIZATION GIVES NEW HAVEN REMARKABLE DECREASE IN DIPHTHERIA

A good example of the lessened incidence of diphtheria following the immunization of susceptible children is furnished by the city of New Haven. In that city a systematic diphtheria immunization campaign has been in progress for the past four years. Reported cases of diphtheria for 1926 indicate that the disease was only one-fifth as prevalent in New Haven during that year as for the state as a whole. The following table gives New Haven's diphtheria case record for the past twelve years:

DIPHTHERIA CASES AND CASE RATES IN NEW HAVEN

Year	Cases	Case Rates	Year	Cases	Case Rates
1915	295	200.6	1921	494	295.8
1916	151	100.9	1922	203	119.5
1917	194	122.4	1923	112	64.8
1918	209	129.4	1924	72	40.9
1919	449	267.1	1925	27	15.1
1920	499	304.2	1926	29	15.9

Figures showing a similar reduction in diphtheria incidence following the extensive use of toxin-antitoxin are now available for many cities in the country. The widespread adoption of preventive measures in many Connecticut cities and towns should result in a further reduction of diphtheria incidence. The hope of accomplishing this result in Connecticut is based entirely upon activity by the various

towns and cities. Each community can control its own diphtheria rate.

Antitoxin cures those persons ill with diphtheria. Toxin-antitoxin prevents diphtheria.—*Bulletin Connecticut State Department of Health.*

A TRIBUTE TO DR. CHARLES V. CHAPIN

On Monday evening, January 17th, the Rhode Island Medical Society paid worthy and well-earned tribute to Dr. Charles V. Chapin of Providence. At the Rhode Island Medical Library Building there was unveiled a portrait of Dr. Chapin.

Dr. Herbert G. Partridge presided and addresses were made by Dr. John M. Peters, Dr. George A. Blumer, both close friends and associates of Dr. Chapin and by Dr. George E. Vincent, President of the Rockefeller Foundation.

Dr. Vincent in his remarkable address outlined the work done by Dr. Chapin as a pioneer in the study and care of contagious diseases and in other lines of public health work and sanitation. Much of Dr. Chapin's success he attributed to his persuasive reasonableness. He considered Dr. Chapin a great research worker, though not at all in the present day restricted laboratory sense. To Dr. Chapin we owe modern high standard statistics of mortality and morbidity. The elimination of politics from health matters had been a tremendous help. Standardization had been practiced by Dr. Chapin when suitable standards had been established but never at the expense of refusal to adopt new methods. Appraisal of the results attained was a constant check which he put upon his work. To a remarkable degree he won and kept the cooperation of the medical profession and maintained a reasonable balance between the work best done by the private physician and that necessarily to be done by the State or Municipality. He believed strongly in the value of public sanitary instruction and felt that legislation should be minimized to real necessities.

With the background of his work and his results, it is not surprising that Dr. Chapin became a man of national and international influence.

Losing himself in his work and in his loyalty to the public service, aided always by his wife, to whom glowing tribute was also paid, Dr. Vincent worthily pictured Dr. Chapin as a hero devoted to safeguarding life.

THE TOTAL NUMBER OF CASES OF CANCER

CANCER is nowhere a reportable disease in the United States and the prevalence of cancer can only be estimated from the death returns. This is hardly a satisfactory method of arriving at it, inasmuch as the duration of the disease varies

considerably, being taken by some authorities to average two years and by others three years before death occurs. With an illness of such long duration it is obvious that many persons who have cancer, and who would assuredly die of it in time, must die of other and more immediately fatal diseases, as pneumonia, for example, and so escape being recorded as dying of cancer. This tends to make the cancer death rate lower than it otherwise would be and causes the prevalence of cancer to appear less than it really is. Again, the cases which are cured cannot be taken into account and this produces a like effect.

There is a factor which is more potent than all others put together in tending to make the prevalence of cancer seem less than it actually is, and this is the incompleteness of the original returns. More people die of cancer than are so recorded, the reasons for their omission from the records being many. Chief among them is the fact that many cases are not correctly diagnosed, even when they end fatally. In hospitals where autopsies are regularly performed this error has been found to be as high as thirty per cent. If the death rate is too low the prevalence which is based upon that rate must be too low also. All things considered, and in the absence of better figures, it appears not an exaggeration to assume that the number of cases of cancer which exist at any place at any time is about three times the number of deaths which occur there in the course of a year. This means that in that part of the United States which is situated on the North American continent fully 300,000 people are suffering from cancer at the present time.—*American Society for the Control of Cancer.*

HEALTH AGENCIES TO FIGHT SMALLPOX

THE American Society for Medical Progress states that more cases of smallpox per year are reported by the United States than by any other nation in the world with the exception of certain parts of Asia. In an effort to redeem our country from this unenviable condition, the official health agencies of the several states have during the months of November and December conducted a campaign of public enlightenment regarding the nature of smallpox and its prevention under the Seymour plan of the Association of State and Provincial Health Officers.

The American Association for Medical Progress has issued a revised edition of its pamphlet "Smallpox—A Preventable Disease." Among the new features of the revised publication is a table giving the vaccinal condition of over 10,000 smallpox cases for 1925 taken from the reports of seventeen states and the District of Columbia, all of which reports are available. More than

ninety per cent of these 10,000 persons afflicted had never been vaccinated; about seven per cent had been vaccinated seven to fifty years previously, leaving less than two per cent who had been vaccinated within seven years prior to their illness.

Copies of "Smallpox—A Preventable Disease," may be had upon request by addressing the American Association for Medical Progress, 370 Seventh avenue, New York City.

RE-OPENING OF THE WELLCOME HISTORICAL MEDICAL MUSEUM

ON October 14th the Wellcome Historical Medical Museum, which had been closed for some months for re-arrangement, was re-opened by Sir Humphry Rolleston, Bart. This museum is not so well known as it deserves to be, for it contains an unrivalled collection of rare objects, pictures, sculptures, manuscripts and early printed books illustrating the evolution and practice of medicine and allied sciences from prehistoric times. One of the most interesting sections deals with primitive medicine, surgery and the healing arts amongst savage and semi-civilised peoples of today. In another section of the museum are the memorial collections of articles used by or associated with pioneers of medical progress, such as Edward Jenner's original manuscripts and instruments, and a portion of the "Lister Ward" removed from the Glasgow Infirmary. The museum was founded by Mr. Henry S. Wellcome, and is the result of collections made by him during many years, which he offered as the Museum of the Section of History of Medicine to the Seventeenth International Congress of Medicine held in London in 1913.—*Bristol Medico-Chirurgical Journal*.

STATE DEPARTMENT OF PUBLIC HEALTH ADOPTS PLAN OF DENTAL HYGIENE COUNCIL

By the joint decision of the Massachusetts Department of Public Health and the Massachusetts Dental Hygiene Council, and by a vote of the Massachusetts Public Health Council, the State has adopted a new dental policy. Its putting into effect was discussed at a round-table conference of dental clinicians and dental hygienists in school work at the State House January seventh.

The department bases its policy on the following grounds, about which it will supply communities with information: (a) The advantage of beginning dental treatment and nutritional care early, especially of the primary teeth at 2-3 years of age, and the first permanent molar at six years of age. (b) The relationship of oral

health to general health—benefits of a clean mouth. (c) The relation of nutrition to teeth development. (d) The importance of dental and nutritional care during pregnancy, infancy and early childhood. (e) The evidence of desirability of clinic work and the desirability of employing a dental hygienist.

It recommends that boards of health now conducting dental clinics with dentists employ hygienists also—the dentist to do fillings and extractions, and the hygienist to teach dental hygiene, clean, examine for fissures and cavities and follow up in the school. The Forsyth Infirmary's operating policy is adopted: 1. Concentrate on pre-school children (age 2-4 years) and follow up through the grades, beginning on the lowest, until the problem is under control for all grades.

Several of the recommendations are technical, but a point which is stressed is number 4: "Do only emergency work for children over seven years of age."

To boards of health contemplating dental work, the department says, among other things, that dental "treatment" clinics under boards of health are not recommended. ("Treatment" means work other than preventive or educational.) "Cleaning of teeth to be done largely for the benefit of contact with the child to create interest in good health habits. Stress the importance of periodic inspection (once a year). Reference to private dentists or dispensary—local or traveling—for early care and all reparative work."

Visiting nursing associations, Red Cross chapters, dispensaries and other private agencies are advised to consult the department as to how these ends may best be served.—*Boston Transcript*.

\$275,000 TO U. OF P. FOR MEDICAL WORK

A CONTRIBUTION of \$250,000 from the Carnegie Corporation to the University of Pennsylvania for the endowment of medical research in the university's School of Medicine and a gift of \$25,000 from Charles H. Ludington for research work in the Henry Phipps Institute during the current year were announced Jan. 10 by Dr. Josiah H. Penniman, Provost of the university.

The announcement came at a conference at which prominent men from various professions and industries met with the representatives of the University of Pennsylvania's medical alumni group to discuss plans for the further development of the schools, hospitals and institutes which contribute to medical service at the university.

Dr. Hubert Work, Secretary of the Interior, alumnus of the university and President of the

Associated Pennsylvania Clubs, was one of the guests of honor and one of the speakers.

In announcing the gift from the Carnegie Corporation, Dr. Penniman said that while the endowment was not applicable to the items of the medical campaign discussed at the conference, it represented such a substantial endorsement of the university's entire plan for medical development that it seemed appropriate to make the first announcement of the gift at this time.

Four major projects for which the university's medical committee announced that it would endeavor to obtain \$3,050,000 were outlined during the conference. Of the amount sought, \$1,100,000 already has been pledged contingently, it was stated.

The first of these projects is the Martin Maloney Medical Clinic, designed to establish a centre for the study and treatment of medical diseases and for investigation as well as publication and diffusion of knowledge regarding such diseases. For this project, \$1,000,000 is sought.

A contingent gift of \$250,000 to be devoted to the construction of this new clinic was received by the university last January from Martin Maloney, philanthropist, of Spring Lake, N. J.

For endowment of the Henry Phipps Institute for the study of prevention and cure of tuberculosis, the sum of \$1,350,000 is sought, of which \$850,000 is in hand.

The third project is the raising of an endowment of \$200,000 for the establishment of a Joseph Leidy Professorship of Anatomy in honor of the memory of Dr. Joseph Leidy, who, prior to his death in 1891, was Professor of Anatomy at the University of Pennsylvania and one of the leading anatomists of his time, as well as biologist.

The fourth project calls for the establishment of a Philip Syng Physick Foundation, with an endowment of \$500,000 as an adjunct of the Department of Surgery.

Physick, the father of American surgery, was the first Professor of Surgery at the University of Pennsylvania, and when the chair of surgery was established at the university in 1805, was the only man in the country to occupy a chair independent of anatomy and devoted to surgery exclusively.—*N. Y. Times.*

HOSPITALS OPERATED BY THE UNITED STATES PUBLIC HEALTH SERVICE

AMONG the many duties imposed on the United States Public Health Service the maintenance of hospitals occupies an important position. Probably comparatively few people know that this Bureau is one of the largest and oldest hospital agencies in the country. This work was begun with the care of sick and disabled seamen.

At this present time this service operates twenty-five United States Marine Hospitals located in seaports and on the Great Lakes and Mississippi River. During the early part of January, 1927, 3,195 beds in these twenty-five hospitals were given over to patients in this service.

In addition to seamen, employees of the Government who are injured while on duty are treated and in some locations veterans of the World War are admitted. Out patient departments conducted by this service gave 5,656 treatments and conducted 738 physical examinations during the first week of 1927.

Wherever necessary many local hospitals in various parts of the country furnish accommodations for patients who are not near enough to the government hospitals. 456 patients were cared for in contract hospitals during this same period.

These figures will convey information with respect to governmental hospital activities.

AUTOMOBILE ACCIDENTS DIMINISHING

THE last four weeks of 1926 recorded 521 deaths from automobile accidents in 78 cities which is 30 less than for the same period in the preceding year. The four week period in March recorded the smallest number of these accidents and the four week period in November the largest. The reasons for the largest mortality in November is generally known to be due to the slippery conditions of roads at that time and the smaller number of accidents in March to the fact that many automobiles are still in storage and those in use in colder sections of the country are properly equipped to hold the road. Also that there is less pleasure driving than during the warmer months. When more incompetent operators are denied the privilege of using the public ways still further gains will be recorded.

The production of better equipped cars and more caution on the part of drivers and pedestrians will operate to reduce the number of accidents.

Every operator is under obligation to develop the greatest possible efficiency in handling motor cars.

FALL RIVER'S FIRST HEALTH COMMISSIONER

As a result of the examination, held November 17, 1926, to establish a list of eligibles for the position of Health Commissioner referred to in the October bulletin, the Massachusetts Commissioner of Civil Service under date of December 17 certified a list of three physicians as eligible for appointment. The physicians whose names were certified, in the order of their standing, were: Dr. Ernest M. Morris, Dr. Owen L. Eagan and Dr. Milton J. Gilbert.

At a meeting of the Board of Health held December 24, Dr. Ernest M. Morris, whose name headed the list, was unanimously elected to the position. Dr. Morris took office December 27 as the active head of the department, and became Fall River's first Health Commissioner.

Dr. Morris is a native of Fall River. He was born in this city January 16, 1887. His early education was secured in the public schools of Fall River, and he is a graduate of the B. M. C. Durfee High School Class of 1906. He then entered Brown University, Providence, R. I., from which he graduated in 1910 with an A.B. degree. He studied medicine at McGill University, Montreal, Canada, by which University he was granted the M.D. and C.M. degrees upon graduating in 1914. From 1914 to 1915 he was House Surgeon at the Royal Victoria Hospital, Montreal, Canada, and from 1915-1917 he was Chief Resident Surgeon at the same institution.

During the World War he held a commission as Captain in the Medical Corps of the United States Army serving overseas. During the greater part of his overseas service he was on detached service with the 46th Division, an active unit, of the English army as Battalion Surgeon. After returning from abroad, he was assigned to Headquarters of the First Corps Area of the United States Army at Boston, Mass., where he was Surgeon in Command of the First Corps Area Hospital.

In 1922 he returned to Fall River and engaged in general practice. He is a member of the Staff of the Union Hospital, serving as Assistant Orthopedic Surgeon; he also holds a similar appointment on the Staff of the Rocky Creek Camp for Crippled Children at Newport, R. I.

Although engaged in general practice previous to his appointment as Health Commissioner, Dr. Morris has been interested in Public Health Work for many years and has completed several special courses at Brown University which will prove of value to him as Executive Officer of the Health Department. He is a Fellow of the Massachusetts Medical Society, a member of the Fall River Medical Society and is also affiliated with several other organizations both professional and fraternal.

Dr. Morris is married and resides at 98 Garden Street.

As soon as practicable Dr. Morris will dispose of his private practice in order that he may be able to devote his full time to the many and varied duties of the position of Health Commissioner of this city.—*Bulletin Board of Health of Fall River.*

PREVENTION OF RABIES IN NEW YORK STATE

PHYSICIANS in this State will have to report to local health officers the names, age and address

of any person under his care or observation who has been bitten by an animal having or suspected of having rabies. Health officers are required to forward the head of an animal having or suspected of having rabies for examination.

In the absence of a physician in charge of a patient bitten by an animal with rabies parents or guardians must make a report.

GIFT TO HARVARD MEDICAL SCHOOL

THE family and friends of Dr. Henry Ehrlich have given eleven thousand four hundred and fifty dollars to the Harvard Medical School for a Memorial Fund, the income of which is to be used for the assistance of worthy students.

RECENT DEATH

LEARY—DR. PATRICK FRANK LEARY of Turner's Falls died January 21, 1927, after an illness of two weeks, at his home in that town, at the age of 59.

He was a native of Jericho, Vt., and a graduate of the University of Vermont Medical Department in the class of 1890. He joined the Massachusetts Medical Society in 1913 and had been a prominent physician of Franklin County, at the time of his death being president of the Franklin District Medical Society and a councillor of the parent society. Dr. Leary was president of the medical staff of the Farren Memorial Hospital, Montague City, and a member of the American Medical Association.

CORRESPONDENCE

THE ADEQUACY OF REPORTING CASES IN MASSACHUSETTS

The Commonwealth of Massachusetts
Department of Public Health
State House, Boston

January 21, 1927.

Editor, Boston Medical and Surgical Journal:

In regard to the adequacy of reporting cases in Massachusetts, about which Dr. George G. Smith talked to me, we have compared the ratio of cases to deaths for the State as a whole with the standard set by the American Public Health Association in their Appraisal Form for City Health Work.

Disease	Standard ratio cases to deaths	State ratio 1925	State ratio 1926
Typhoid	10:1	8:1	9:1
Diphtheria	15:1	13:1	14:1
Scarlet	50:1	88:1	97:1
Measles	100:1	85:1	80:1
Whooping cough	25:1	30:1	28:1

This is, of course, surprisingly good, the poorest showing being in measles. The improvement over the standard for scarlet indicates its mildness.

For tuberculosis (all forms) in 1925 there were reported 6,210 cases and 3,459 deaths, while for 1926 the figures were 6,382 and 3,483 (estimated—final figures for deaths not yet available). This is slightly under two new cases per death, which is the Appraisal Form standard, but considerably below what some cities have accomplished and below what Dr. Emerson calls for in Boston.

We are planning to study by communities the interval between reporting tuberculosis and death. This should be enlightening. Attached please find also a study which has been made of the pulmonary cases and deaths by counties.

By the way, for the venereal diseases the "standard" is 400 cases per 100,000 population. In 1925 the State figure was 177 cases per 100,000; and in 1926, 162.

We recently had an instance of an unreported measles admitted to a general hospital, and last year an unreported scarlet started trouble through hospital admission.

Cordially,

GEORGE H. BIGELOW, M.D.,
Commissioner of Public Health.

**RATIO OF PULMONARY TUBERCULOSIS CASES TO DEATHS
FOR THE YEAR 1925 BY COUNTY**

	Pulmonary Tuberculosis		
	1925		
	Cases	Deaths	Ratio
Barnstable County	23	19	1.21:1
Berkshire County	80	48	1.67:1
Bristol County	591	305	1.94:1
Dukes County	2	2	1:1
Essex County	527	304	1.74:1
Franklin County	29	13	2.23:1
Hampden County	311	187	1.66:1
Hampshire County	83	63	1.32:1
Middlesex County	921	435	2.11:1
Nantucket County	0	0	0:0
Norfolk County	213	147	1.48:1
Plymouth County	191	135	1.41:1
Suffolk County			
Boston cases	1688	664	2.54:1
Excluding Boston cases	121	39	3.10:1
Worcester County	471	350	1.35:1

**CORRECTION OF STATEMENT REGARDING
CHAPTER 415 OF THE ACTS OF 1921**

The Commonwealth of Massachusetts
Department of Mental Diseases
Division for Examination of Prisoners
Room 818, 11 Beacon Street, Boston, Mass.

January 21, 1927.

Editor, Boston Medical and Surgical Journal:

I read with interest your editorial in the current issue of the BOSTON MEDICAL AND SURGICAL JOURNAL entitled "Expert Testimony and the Psychiatrist."

I for one appreciate your presenting this matter to the attention of the profession, emphasizing as you do the fact that the psychiatrists themselves are endeavoring to place psychiatry, in its relations to the law, on a sounder and less partisan basis, as well as attempting to raise the standards of expert testimony as a whole.

Your mention of the Briggs law leads me to bring before you the fact that this law was passed not last year as stated in the editorial, but in 1921 as Chapter 415 of the Acts of that year. The law has been in effect long enough to demonstrate conclusively its value and it has been widely recognized as one of the most progressive pieces of legislation of this sort yet passed.

Trusting that you will pardon me for calling your attention to this error, I remain

Very truly yours,

WINFRED OVERHOLSER, Director.

A TURKISH-AMERICAN NIGHT

To the Editor:

Through the JOURNAL I desire to call the attention of my colleagues to the following event:

Last Sunday night at 3:20 A. M. my bell was rung violently several times. I hurried out of bed, thinking it might be fire or some grave accident. I realized that somebody was urging me to open the door, so that I might attend to his toothache." When I answered him repeatedly that I could not do anything for him, as I was not a dentist and that he must apply to one of that profession, he said: "I myself am a physician and want to talk with you just one moment. Open the door, please."

Whereupon I opened the door. To my utter surprise it was very obvious that he was not a physician, as pretended, and he was slightly under the influence of intoxicating liquor. Without waiting one minute, he rushed into my reception room, leaving two companions in the hall. When I asked the visitor why he deceived me by saying he was a physician, this time he claimed to be the son of a specialist doctor in Commonwealth Avenue; and he persisted that I attend to his teeth.

My family and I were made aware that we were confronted not by a doctor nor a sick man, but, on the contrary, we were in personal danger, exposed any moment to the merciless operations of these hold-up men. You can imagine the degree of fear and dread we had awaiting our destiny there for about twenty minutes, in a half-dressed condition, overcome with awe and anxiety in not knowing what to do, especially during the time the intruder became occupied in another room with my telephone, as if trying to find a dentist, while in reality he was simply playing with the apparatus, according to the testimony of my son, no doubt with the intention of getting me into that room. We had no means of getting out of the horrible situation; only, we were praying, and by God's wonderful interference a police officer suddenly appeared as a heavenly messenger just at the proper time and in a seemingly miraculous way as answer to our silent prayers. The policeman drove our visitor out of my house, along with the two companions waiting in the hall.

I applied the next morning to the police station, to find out who they were, wanting to have the address of that young man whose father he claimed to be a specialist in Commonwealth Avenue. The police officer, unfortunately, had not taken his address. He promised to get it soon. It is not my intention to bring any suit against the young man, only I would like to talk privately with his physician-father, in order: (a) to remove the dreadful impression left on my whole family of that horrible night; (b) to avoid such degradation of the medical profession; and (c) to protect the safety of the whole community.

I hope for my colleagues no similar recurrence of so horrible a night—not unusual in Turkey, from where I came, but certainly unexpected in America. I do desire, however, to hear soon from that unknown specialist.

M. HAGOPIAN, M.D.

351 Massachusetts Avenue, Boston.

January 22, 1927.

NOTES ON NATIONAL AFFAIRS

BY JAMES A. TOBEY

No progress had been made on public health and medical legislation up to the time Congress reconvened after its customary recess over the Christmas holidays, but there are several new measures of much interest and significance to physicians.

MEDICINAL LIQUOR

Prohibition is, of course, one of the perennial issues in Congress. Since the decision of the United States Supreme Court in *Lambert vs. Yellowley*, sustaining the right of the government to limit prescriptions of liquor, much attention has been given to

medicinal alcohol, and this has been accentuated by the alleged deaths from poisoning due to intoxicants adulterated under Federal auspices. Several measures of importance dealing with this subject have recently been introduced. One of these, S. 4915, would amend the National Prohibition Act, so that the use of alcohol for medical purposes would not hereafter be interfered with. This bill, introduced by Senator Hawes, has been referred to the Senate Committee on the Judiciary.

A MEDICAL LIQUOR CORPORATION

With the reported backing of Secretary of the Treasury Mellon, Representative Green of Iowa has introduced a bill (H. R. 15601) which proposes the creation of a private corporation to manufacture all medicinal alcohol, under the strict supervision of the government. The nine original directors and organizers of this corporation would be appointed by the Secretary of the Treasury for two-year terms and the corporation would be given a monopoly on the 14,000,000 gallons or so of medicinal whisky used annually in the United States. The supply would be concentrated in six depots instead of the 37 bonded or taxed warehouses where it is now kept. All such liquor would be purchased or seized on payment of the fair value thereof as determined by a committee of three appointed by the Secretary, but the price to be paid by the public and the distribution of the spirits would be subject to government control, and the books of the corporation would likewise be supervised by the government. This liquor would be issued only to those legally entitled to it, and the bill further requires that it should be of standard strength, purity and quality. The main offices of this corporation would be in the District of Columbia, with branches where necessary.

The bill is a long one, going into details as to organization and powers of the corporation. It is reported to have the support of wets and dries alike, which is remarkable, if true. From the standpoint of the medical profession, it seems like a reasonable measure, if the government is to continue to control such matters. The bill was referred to the Committee on Ways and Means of the House.

ACCURACY OF HYPODERMIC TABLETS

Another activity of the Bureau of Chemistry has been the issuance of recommendations on the degree of accuracy of hypodermic tablets, as determined by the Contact Committees of the American Drug Manufacturers' Association and the American Pharmaceutical Manufacturers' Association. Copies of this report can undoubtedly be obtained from the Information Service of the Department of Agriculture, Washington, D. C.

Apropos of the Bureau of Chemistry, the Secretary of Agriculture has suggested that the regulatory and research work of this bureau be separated and combined with similar functions of other bureaus, such as Soils, to form two new bureaus.

INTERNATIONAL CONTROL OF NARCOTICS

The State Department has recently sent instructions to American ambassadors and ministers concerning the attitude of our government on the control of narcotics. The United States views with disfavor the narcotic conventions held by the League of Nations in 1924 and 1925, but is an adherent to The Hague Treaty of 1912, one section of which provides that the various signatory powers shall endeavor to suppress the traffic in opium. No steps have apparently been taken along these lines and the United States wants this provision enforced. Attention is called to the American legislation which forbids the importation of opium into the United States, except by permit and for medicinal purposes only, and this law is suggested as an example of effective control.

WAR ON QUACK ADVERTISING

The United States Postoffice had long had a system of investigating alleged cures and remedies for disease and, if the drug or medicine is fraudulent, of issuing a fraud order which debars the maker from the use of the mails. The Federal Trade Commission, believing that not all frauds, especially advertising ones, are reached by the postal authorities, is planning a drive on quacks, particularly those who capitalize health and disease. This Commission is made up of five members and has the power to investigate unfair trade practices and, when called for, to issue an order to cease and desist certain procedures. In the case of fraudulent medical advertisements, the Commission has already dealt directly with a number of impostors, but in the future it is said to plan a campaign against the publishers of magazines which carry objectionable advertising matter.

MISCELLANEOUS ITEMS

A bill (H. R. 15477) for a national institute of health has been introduced by Representative Kindred of New York, who is both a physician and a lawyer. It is a companion to S. 4540, introduced by Senator Ransdell at the last session.

Employees of the Veterans' Bureau formerly commissioned in the Public Health Service would be given travel expenses subsequent to June 7, 1924, according to S. 4755. The striking thing about this proposition is that it has actually received the sanction of the Director of the Budget, who has refused to approve the plan for correlation of Federal health activities (H. R. 10125) as "contrary to the President's financial policy."

NEWS ITEMS

A MOVEMENT DESIGNED TO IMPROVE THE QUALITY OF MEDICINAL LIQUORS—An association is being formed in New York City for the purpose of discouraging the purchase of alcoholic liquors from bootleggers.

It is suggested that where the use of medicinal whisky is indicated it should be secured through reputable druggists.

Reputable physicians are being urged to take out permits to issue such prescriptions.

Any person interested can obtain detailed information from the Association Against Impure Liquor, Times Building, New York City.

SURGEON A. R. SWEENEY has been relieved from duty at Port Arthur, Texas, and directed to proceed to Boston, Mass., and assume charge of the quarantine station at Gallops Island.

DR. THORKILD ROVSING, professor of clinical surgery at the University of Copenhagen, formerly president of the Danish Physical Society, died recently. He was born in 1862.

UNUSUAL NUMBER OF DESCENDANTS—Dona Petra Mora, 122 years of age, died January 14, 1927, in Pomona, Calif. She left a son, two daughters, 28 grandchildren, 72 great-grandchildren and seven great-great-grandchildren. Two brothers are living, each over 100 years of age.

EXTENSION OF THE SHEPPARD-TOWNER ACT—The Senate has adopted a compromise bill which extends the Sheppard-Towner Maternity Act until June 30, 1929, thus breaking a deadlock which has existed since January 5.

DR. A. T. MORRISON NAMED FOR POST IN HEALTH SERVICE—President Coolidge has sent to

the Senate the nomination of Dr. Albert T. Morrison to be assistant surgeon general of the Public Health Service.

CONFERENCE ON MATERNITY AND INFANCY CONCLUDED WITH VISIT TO CLINICS HELD IN BALTIMORE—The annual conference of State directors of maternity and infancy work, which has been holding its sessions this week at the Children's Bureau of the Department of Labor, in Washington, was closed on January 14 with a visit by the delegates to Baltimore, Md., where they attended clinics and lectures relative to child welfare.—*United States Daily*.

THE TITLE "WOOD ALCOHOL" TO BE CHANGED TO "METHANOL"—This term has been adopted by the Public Health Service in the hope of reducing fatalities. The omission of the word alcohol would tend to protect those to whom this designation might suggest a liquid suitable for drink. It may be a question whether the new name will be as confusing as the former, which was very generally recognized as the meaning of a dangerous product.

LITERATURE DISTRIBUTED BY THE PUBLIC HEALTH SERVICE—The United States Public Health Service during 1926 distributed 807,228 separate pieces of health literature. These figures do not, however, include the separate weekly *Public Health Reports*. In addition to this list quite a number are sent out on paid subscriptions. Various documents dealing with health progress may be procured from the Public Health Service at Washington, D. C., at a nominal price.

EXPERIMENTS ON ANIMALS HAVE HAD AN INFLUENCE ON INCREASING THE AVERAGE LENGTH OF LIFE—The study of physiology and pathology of the human race by use of animals during the last 30 years has added 12 years to the human life according to a statement of the United States Public Health Service, reported by Matthias Nicoli. Measurement of blood pressure, according to Dr. Flexner, is one of the great results of experimental work on dogs, and much useful knowledge, leading to the use of many valuable methods of treatment and prevention of disease, is founded on animal experimentation.

Among the treatments which have been standardized through animal experimentation Dr. Flexner mentions digitals in heart disease, quinine for malaria, antitoxin for diphtheria, vaccines for lockjaw and typhoid fever, and insulin, which, he says, has made happy many of those who have suffered from diabetes.

Dr. Flexner asserts that any experiments which cause pain to an animal are always done under an anesthetic, just as in cases of operations on man.

He further states that the substitution of systematic experiments on animals for haphazard tests has brought order and new knowledge into drug therapy.

INSTRUCTION OF CHILDREN WITH REFERENCE TO THE CARE OF CHILDREN—The Social Service Division of the Children's Bureau is maintaining a campaign for the instruction of classes of children throughout certain sections of the country. Schoolgirls in the seventh to ninth grades are given instruction in regular care of babies. In many cities this instruction is a regular part of their school work. These classes originated in the Little Mothers' Leagues some years ago and were conducted after

school hours. It is expected that the benefits will extend to the mothers as well as to the children.

At the meeting held recently before the Social Service Division of the Children's Bureau, Dr. Robert L. DeNormandie of Boston discussed matters concerning maternal mortality study.

MORE HOSPITALS MAINTAINED BY INDUSTRIAL PLANTS—Emergency hospitals of industrial plants are being developed throughout the country covering nearly 2,000,000 workers employed by 407 companies.

Special research among those benefited shows that the use of poisonous substances in industry is widespread. These dangers are to a large extent recognized and are being guarded against, but new problems are constantly arising which may involve serious consequences to the workman which have not hitherto been foreseen—for example, the manufacture of tetraethyl lead gasoline, the use of radioactive paints in the painting of watch and clock dials, and the use of phosphorus in the manufacture of fireworks. Benzol poisoning also is found to affect a considerable number of workmen.

INFLUENZA EPIDEMIC IN EUROPE OF MILD CHARACTER—The epidemic which has been reported from Europe recently is regarded in most cases of a benign character, the fatalities being found chiefly among aged persons, according to a statement made by the Public Health Service. Holland, Norway, Switzerland, France and Spain are the countries particularly affected. In Paris the maximum number of cases was reached in December with 332 deaths from influenza and 1,300 from respiratory diseases. In England the general death rate increased during the last week in December, but the disease is not so extensive as in some of the other countries reported.

MICKLE FELLOWSHIP AWARDED TO THE DICKS—Dr. and Mrs. George F. Dick of Chicago, according to *Science*, have been awarded the Charles Mickle Fellowship for 1926-27 by the faculty of medicine at the University of Chicago.

MASSACHUSETTS SOCIETY FOR MENTAL HYGIENE—The Massachusetts Society for Mental Hygiene has elected as president Dr. Charles Macfie Campbell, professor of psychiatry at the Harvard Medical School, and as secretary Dr. Charles E. Thompson.

PORTRAIT OF WALTER REED—*Science* reports the unveiling of a painting of Walter Reed at the George Washington University Medical School. At the time of his discoveries in regard to the transmission of yellow fever Dr. Reed was a member of the faculty of this school.

NATIONAL COMMITTEE FOR MENTAL HYGIENE—The Rockefeller Foundation, *Science* reports, has renewed for a second period of three years its appropriation of \$40,000 to the National Committee for Mental Hygiene for the training of Fellows in extramural psychiatry and psychiatric social work. These fellowships are open to physicians under 35 years of age, graduates of a Class A medical school, who have had at least one year's training in a mental hospital.

INSPECTION OF LABORATORY ANIMALS—The American Association for Medical Progress, according to the *Journal of the American Medical Association*, has completed a survey of medical schools and

research institutions of the United States with regard to inspection by responsible visitors and the care of laboratory animals.

It was found that responsible visitors are welcome at all times, some institutions even extending special invitations to officers of humane societies. Rules have been adopted providing for the approval of the laboratory director of all operations, and he alone can make exceptions to the use of anesthetics, and then only when anesthesia would defeat the object of the experiment.

NOTICES

A CORRECTION OF THE DISCUSSION OF DR. C. H. LAWRENCE'S PAPER

Editor of The Boston Medical and Surgical Journal:

Would you be good enough to publish a slight correction of my discussion of Dr. Lawrence's paper which appears on page 50, left hand column, first sentence of the number of January 13. Some words have been left out of the middle of the sentence. The way it should read is as follows:—"If he gets no thyroid he gets symptoms of myxedema; if he is given sufficient thyroid to keep his metabolism normal, he develops angina pectoris."

Very sincerely yours,
J. H. MEANS.

A COURSE OF FIFTEEN LECTURES ON THE NEWER KNOWLEDGE OF THE PHYSICAL HEALTH OF CHILDREN

THESE lectures will be given in Boston University School of Education by eminent experts on child health under the direction of J. Mace Andress, Ph.D., Lecturer on Health Education, Boston University and Boston School of Physical Education, and with the cooperation and endorsement of the Massachusetts Department of Public Health.

The lectures will be given on successive Tuesday evenings, at eight o'clock, in Jacob Sleeper Hall, Boston University, 688 Boylston Street, Boston, from February 8 to April 12, April 26 to May 31, except February 22.

The course will be of practical value to teachers, parents, nurses, social workers, and to all who are responsible for the training of children. These lectures will be plain, common-sense talks in non-technical language that attempt to present the latest thought on the physical health of children. Each lecture is followed by a period of general discussion.

Credit of one point will be given toward the degree of Bachelor of Science in Education in the School of Education. Those enrolling for degree credit must attend at least thirteen lectures and meet the other requirements announced by the Director of the course.

No charge is made for the lecture on February

8. The fee for a transferable course ticket is \$10.00. Single admission tickets are sold at \$1.00 each.

I. *Dramatic Episodes in Health Progress.* February 8. J. Mace Andress, Lecturer on Health Education, Boston University and Boston School of Physical Education.

II. *Safeguarding the Health of Mother and Baby.* February 15. Merrill E. Champion, M.D., Director, Division of Hygiene, Massachusetts Department of Public Health.

III. *At the Threshold of School Life.* March 1. Richard M. Smith, M.D., Assistant Professor of Child Hygiene, Harvard School of Public Health.

IV. *Modern Chemistry in the Service of Health.* March 8. Gorham W. Harris, Ph.D., Associate Professor of Chemistry, Simmons College, Boston.

V. *Diabetes and Recent Discoveries.* March 15. Helmuth Ulrich, M.D., Associate Professor of Clinical Pathology, Boston University School of Medicine.

VI. *The Common Cold.* March 22. M. J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard University Medical School.

VII. *The Newer Knowledge of Nutrition.* March 29. Lou Lombard, Health Instructor in Nutrition, Division of Hygiene, Massachusetts State Department of Public Health.

VIII. *The Present Ideas of Dental Hygiene.* April 5. Harold DeW. Cross, D.M.D., Director, Forsyth Dental Infirmary for Children.

IX. *The Annual Physical Examination.* April 12. Fredricka Moore, M.D., Pediatrician, Massachusetts State Department of Health.

X. *Cardiac Troubles in Childhood.* April 26. William H. Robey, M.D., Assistant Professor of Medicine, Harvard Medical School.

XI. *The New Physical Education.* May 3. Carl Schrader, State Supervisor of Physical Education.

XII. *Stand Tall. Sit Tall.* May 10. Norman W. Fradd, Instructor in Physical Education, Harvard University.

XIII. *Sunshine and Recent Developments in Hygiene.* May 17. Thomas F. Kenney, M.D., Director, Department of Health, Worcester, Mass.

XIV. *Educational Methods for Accident Prevention.* May 24. Lewis E. MacBrayne, General Manager, Massachusetts Safety Council.

XV. *The Health Education Program.* May 31. J. Mace Andress, Ph.D., Lecturer on Health Education, Boston University and Boston School of Physical Education.

REPORTS AND NOTICES OF MEETINGS

MEETING OF THE STAFF OF THE HARLEY PRIVATE HOSPITAL, INC.

THE Annual Meeting and Dinner of The Harley Hospital Staff will be held at The Harvard Club, 374 Commonwealth Avenue, Boston, on Tuesday evening, February 8, 1927, at 7 o'clock. There will be a short business meeting followed by the election of officers for the ensuing year.

ZACHARY A. MOLLIKA, M.D., *Secretary*.
JAMES J. HEPBURN, M.D., *President*.

NORFOLK SOUTH DISTRICT MEDICAL SOCIETY

A MEETING for Medical Improvement will be held on Thursday, February 3, 1927, at 12 o'clock noon at the Norfolk County Hospital, South Braintree. Speaker: Dr. Edwin A. Locke. Subject: "Pneumonia."

MEETING OF THE BOSTON HEALTH LEAGUE

A MEETING of the Boston Health League will be held in Room 500, 14 Beacon Street, Boston, on Wednesday, Feb. 9, at 3 p. m.

Dr. Edwin H. Place, Director of the South Department of the Boston City Hospital, will speak on: "Recent Advances in the Etiology and Control of Measles, Scarlet Fever and Whooping Cough."

Members of the medical and nursing professions are cordially invited.

THE BOSTON ORTHOPAEDIC CLUB

THERE will be a meeting of the Boston Orthopaedic Club in John Ware Hall, Boston Medical Library on February 14 at 8:15.

The speaker is Dr. Arthur Steindler of Iowa City, Iowa. His subject is "Surgery of the Upper Extremity."

AMERICAN COLLEGE OF SURGEONS

THE Sectional Meeting of the American College of Surgeons for the New England States will be held in Hartford, Connecticut, on February 28 and March 1, with headquarters at the Bond Hotel. An interesting program is being prepared.

PHYSIOLOGICAL CONFERENCE MEETS

THE Physiological Conference of Harvard Medical School held its last meeting Wednesday afternoon, January 19, 1927, at the Bowditch

Library. Professor Henri Fredericq, head of the Department of Physiology at the University of Leige, Belgium, spoke on "Chronaxie: The Measurement of Excitability in Living Tissues."

Professor Fredericq began his lecture by saying that for a long time the classical threshold method to determine the amount of excitability was used. Here by means of an electric current of increasing intensity, one endeavored to find the threshold by watching for the smallest perceptible effect on the tissue. The intensity of the current was alone taken into account, the duration of the stimulus being considered immaterial. More precise methods have proved the conclusions incorrect, and now we must measure excitability not only by the current's intensity, but also by its duration. In this connection, Engelmann and Hoorweg in experiments on rabbits and frogs formulated the following laws: When long-current times prevail, the threshold level keeps invariable; for short durations, the threshold is higher, the excitability weaker.

Thus it becomes evident that the time factor is of great importance. According to Lapicque, every organ varies in its rapidity of response to stimulation. In this way he made a distinction between quick and slow organs, justifying our attempts to characterize the excitability by a time value instead of an intensity value. The curve relationship of response to *current duration* is that of a hyperbola.

Any point on this hyperbola may be chosen to characterize the excitability. Professor Weiss and Lapicque endeavored to find a mathematical expression of the hyperbolic curves. Later Lapicque recognized that the curve was not quite a hyperbola and would not fit a mathematical formula. So he expressed excitability by the value of time, and called it "chronaxie."

On a graph of excitability, the point of chronaxie is best placed where the curve ceases to show an upward-directed concavity. This point corresponds to the shortest time for the weakest active intensity. It indicates what Lapicque called the "temps utile" or the "serviceable time." In short, we use at present a value of time rather than a value of current intensity to characterize the excitability.

Measuring the threshold intensity by the old method depended on several factors: electrical resistance, muscle variations in different specimens, position, shape, size, and grade of imbibition of the electrodes. *The chronaxie method eliminates these errors.*

It is a well-known fact that the quickness of reaction is quite different in striated and smooth muscle. The old method does not explain this difference. A comparison of the chronaxies shows that for slow muscles, there are long chronaxies, and for quick muscles, short chronaxies. The new method also shows and explains that smooth muscles are excited only by

long currents, because their quickness of excitability is small, and that striated muscles have a great quickness of excitability. Cold lengthens and fatigue increases two or three times the chronaxie of the fatigued muscle. In the case of the heart chronaxies of the auricles and ventricles are the same.

A study of the action of the heart nerves on the excitability of the cardiac musculature is fruitful under the new method. It is found that faradization of the vagus decreased the chronaxie or increased the quickness of excitability. Generally speaking, also, drugs that moderate the cardiac rhythm act like the vagus on cardiac excitability.

Lapicque, after systematic investigation concluded that a muscle and its motor nerve are an isochronal system, that is, each have the same chronaxie. From this observation, a system of curarization has been built. After application of curare this isochronal system is broken and indirect excitability is abolished with preservation of a direct one. From this theory we foresee four kinds of curarization, unchanged chronaxie of the nerve with lengthening and shortening of the muscular chronaxie, and unchanged chronaxie of the muscle with lengthening and shortening of the nerve chronaxie. Thus, if veratrin and strychnine, both curarizing drugs if used separately, are administered simultaneously, the isochronal system appears maintained. This is due to both chronaxies of muscle and nerve varying the same amount in the same direction.

According to Lapicque another interesting variation exists. A shorter chronaxie implies a greater permeability of the membranes of a tissue than a long chronaxie. This degree of permeability is measured by the amount of imbibition which is measured by the weight of the tissue dipped in a given solution. Thus, it is found that substances like veratrin, nicotine, and potassium which increase the tissue's imbibition diminish the chronaxie, and conversely, substances like curare, spartein, and calcium, which decrease imbibition, lengthen the chronaxie.

At this point Professor Fredericq gave the results of his investigations on the influence of pH on the chronaxie of the turtle's heart. Contrary to his expectations that for a lowering of pH a shortening of the chronaxie would result, the figures obtained were quite different. This was due to a too narrow range of pH for fear of overworking the heart and causing its stoppage.

There are some nerves, as the vagus and vasomotor nerves, which need a repeated stimulus to be efficient. These are called iterative nerves. For the measurement of this excitability, four values must be known: 1. the threshold intensity or rheobasis, 2. the threshold duration or chronaxie, 3. the frequency of the stimuli, and

4. the absolute number of stimuli. If two of these values are kept invariable, the two others vary in function of one another.

In some cases, however, the chronaxie of the terminal organ does not agree with that of the nerve. This is called heterochronism, which is explained by a phenomenon similar to that of latent addition. Thus, a repeated stimulus is necessary for excitability.

Professor Fredericq concluded his lecture by saying that through chronaxie we are able to understand a time value in excitability, enabling us to foresee the quickness of muscular contraction, speed of nervous conduction, duration of nervous negative variation, and various theoretical conclusions. In the future we must consider in a study of excitability the duration and not the intensity, the quickness, and not the threshold.

BARNSTABLE COUNTY HEALTH DEPARTMENT

THE Barnstable County Health Department celebrated its installation at a meeting in Hyannis on January 18. This is the first county health unit in New England. For five years the Cape Cod Health Bureau aided by the Public Health Service has been advocating the importance of health service to boards of health and school committees in ten or more towns in the county. The arrangement depended on annual appropriations at their meetings and was consequently unstable. Under permissive legislation the staff of the Bureau has been taken over by the county and all the boards of health and school committees of the fifteen towns have signified their desire for the service. The Cape Cod Health Bureau, however, remains as an organization of interested citizens to support health work on the Cape. The attendance at the meeting of some one hundred and fifty persons representing all parts of the Cape indicates the very great interest in the new Department.

In addition to the persons present who had contributed to the success of the work it was pointed out that the late Doctor Sprague as the first health officer of the Bureau and the late Doctor Kelley as Commissioner of Public Health should be especially remembered. This method of offering full-time trained health service under official auspices to a group of towns without adequate resources individually, a method common in most of the country except New England, should have a profound effect in other rural parts of the Massachusetts and neighboring states. Doctor A. P. Goff, the County Health Officer, should take up his new duties with every confidence of hearty local support.

The program was as follows:

Welcome and Explanation of Meeting—Dr. A. P. Goff, County Health Officer.

Introduction of Speakers—Mr. G. W. Hallett, Chairman.

Address—Dr. George H. Bigelow, Commissioner of Public Health, Massachusetts, representing Hon. Alvan T. Fuller, Governor of Massachusetts.

Address—Asst. Surgeon-General W. F. Draper, U. S. Public Health Service.

Address—Surgeon L. L. Lumsden, U. S. Public Health Service.

Address—John D. W. Bodfish, County Commissioner.

Closing Remarks—Dr. Richard P. MacKnight, District Health Officer; Mr. C. R. Bassett, Ex-Representative.

MEETING OF THE R. C. R. C. CLUB

THIS meeting was held Tuesday, January 25, 1927 at the Harvard Club. After the dinner, the exercises were opened by Dr. H. P. Towle who introduced Dr. Ralph Pemberton of Philadelphia, who gave an instructive lecture on Arthritis with lantern slide illustrations.

Speaking of the history of this disease he referred to the work on this subject done in England before the war which was interrupted by the disturbances of that time. His work in Philadelphia was based on a Clinic in which 1100 cases had been studied. The subject is generally recognized as of much importance and he discussed the etiology of arthritis at length. He spoke especially of the importance of focal infections but felt that although there were many cases in which infections played a definite role it may be that in others this theory has been over emphasized. Very little real advance had been made in the study of the arthritides since the War and he felt that we had been led to place too much reliance on focal infections.

As a matter of routine every effort should be made to get rid of foci but the work does not end with that particular method of treatment because many people get well without any attention having been paid to such infections.

There are very many factors which enter into the cause of arthritis and he spoke particularly of the influence of the nervous system, the absorption of poisons from the intestinal tract, and that it must be recognized that the action of bacteria may be through disturbance of nutrition quite as much as though direct invasion of a joint. So far as focal infections are concerned tonsillitis led the list, dental complications next and the genito-urinary diseases were lower down in the scale.

He explained particularly the investigations which have been made with reference to the changes taking place in the blood, bringing out several interesting theories based on studies of the red blood cells and explained the varying

counts of specimens obtained at different stages of securing specimens of blood. Much of the study had been conducted by noting the effect of the introduction of glucose into the system which cleared up some previous misconceptions.

Many of the measures which cause improvement in this disease seem to have been effective because of better circulation throughout the system as demonstrated by outdoor exercises in suitable cases, baking, massage, and the prevention or correction of acidosis. So far as the cartilages are concerned, it has been a matter of speculation as to the nutrition of these structures because of the absence of blood supply. The opening of the channels by which the blood is supplied to the extremities by use of nitrites has been followed by improvement in many cases. In addition to the treatments referred to above, arsenic is a very important remedy in treating this disease, and radium X-ray and potassium iodide also have been beneficial in suitable cases.

In connection with the possible absorption of poisons from the intestines he felt that elimination by suitable evacuates and colonic irrigation may be very valuable. In a large proportion of cases the diet should be carefully regulated and the usual intake of calories may have to be materially reduced until certain changes have been brought about. Rest at times is important in allowing recuperation and recumbent posture has its value in improving the general flow of blood to the extremities.

The article was of very much interest and active discussion by the members followed which enabled Dr. Pemberton to clarify the interpretation of his arguments. This very brief report of his lecture is of course very unsatisfactory because the subject was treated in a very scientific way and evidence of careful investigation enabled the lecturer to lay down the important points in a very impressive manner.

We have been personally promised the complete paper by Dr. Pemberton if he is able to find time to prepare it and in connection with it, the further modification of his views as brought out in the discussion, following the lecture.

Dr. Towle next called upon Dr. Arlie V. Book to tell of some work done by him at the Massachusetts General Hospital. The subject chosen was: "Some Aspects of the Respiratory and Circulatory Mechanism in Man." In opening his address Dr. Book reported that as early as two hundred years ago efforts had been made to determine the amount of blood and the rapidity of its flow through the human heart and that even with comparatively crude mechanical devices approximately correct estimates had been made which are substantiated by the more scientific analyses in use at the present time.

A very clear explanation of the intricate

chemical studies of the blood which the author had employed in his studies was presented. He went on to show the effect of posture and exercise in explaining the various problems which are concerned in the study of the heart's action and explained the benefits experienced by changing from a horizontal to an upright position in certain types of dyspnoea. It was made plain that an inadequate understanding of the heart as a muscular organ has existed in the minds of clinicians for it is a structure which of necessity is constantly in a comparatively well trained condition and quite unlike the ordinary voluntary muscular tissue which has oftentimes to be subjected to training to enable it to perform efficiently. It was clearly shown that surgeons often are unduly concerned about the behavior of the heart under anaesthesia and the strain of an operation and that the presence of a murmur might not be of much importance. The especial points emphasized were made clear by lantern slides. These few practical references to the address convey little information as to the very scientific experiments reported and the logical deductions based on them, but Dr. Boek has promised to write on this subject so that the readers of the JOURNAL may profit by some of the privileges which have been enjoyed by the members of the Club.

HARVARD MEDICAL SOCIETY

THE next meeting of the Harvard Medical Society will be held February 8 at 8:15 P. M. in the Amphitheatre of the Peter Bent Brigham Hospital.

The program follows:

1. Presentation of cases.
2. The Reaction of Oily Substances Entering the Lung, by Dr. Henry Pinkerton of the Department of Pathology of the Peter Bent Brigham Hospital.
3. Silicosis, by Dr. Edgar L. Collis, B.A., (Oxon), M.A., M.D., M.B., M.R.C.S., L.R.C.P., M.R.C.P., Talbot Professor of Preventive Medicine, Welsh National School of Medicine, Cardiff, Wales.

All members of the medical profession, students and nurses are invited.

THE COMBINED MEETING OF THE SUFFOLK DISTRICT MEDICAL SOCIETY AND THE BOSTON MEDICAL LIBRARY

This meeting proved to be one of the most interesting thus far in the series scheduled for this winter.

The meeting was preceded by a reception to Dr. Paullin and Dr. McCord at the Deaconess Hospital which was attended by a large number of physicians from Boston and vicinity who were pleased to meet these gentlemen who have conducted scientific studies on the incidence of syph-

ilis among the southern negroes. The clinical and pathological work done in the Deaconess Hospital was explained by Dr. Joslin and the surgeons, and a collation was served.

Dr. James E. Paullin is Professor of Clinical Medicine in Emory University School of Medicine and his clinical work was done in the Grady Hospital, and Dr. James R. McCord is Associate Professor of Obstetrics and Clinical Gynecology in the same institutions. The material for the studies conducted by these gentlemen is abundant and advantage has been taken of the opportunities afforded by a large number of syphilitic men and women in the general wards, and of infants in the obstetrical department of the hospital.

The literary exercises were conducted in the Medical Library in the evening. So far as studies of adults are concerned, it was found that lesions of the central nervous and cardiovascular systems head the list of cases of syphilis in the hospital observed by Dr. Paullin. This was explained by finding that the average negro in that locality paid little attention to the early manifestations of syphilis but sought treatment when the disease or its effects interrupted physical activities.

Dr. McCord found that a very large percentage of the infants born in the obstetrical department also had syphilis.

Some of the statistics quoted in these papers have been published and the work now being prosecuted will be made public from time to time.

It may be recalled that the meeting fell on one of the coldest nights of the winter and the large attendance must have been gratifying to the speakers, and a demonstration that Suffolk District can secure an audience for visiting doctors.

HARVARD PUBLIC HEALTH SCHOOL NEWS

LECTURES IN INDUSTRIAL HYGIENE AND TOXICOLOGY

DR. EDGAR L. COLLIS, Talbot Professor of Preventive Medicine, Welsh National School of Medicine, Cardiff, Wales, will deliver a series of lectures during the month of February on "Industrial Hygiene and Toxicology." This series of lectures is being sponsored by the Harvard Public Health School, of which Dr. William L. Moss is Acting Dean.

Dr. Collis has done extensive work along health welfare lines, and has published a variety of articles and books dealing with Industrial Hygiene. His outstanding work in Industrial Hygiene is known to be in the general field of Industrial Phthisis.

These lectures will be held at the Public

Health School as follows (some of these lectures were delivered before this notice was received):

1. Introduction: Place of industry in human development and as a public health institution.
2. Relation of industry to climatology: Effect of industrial revolution.
3. Industrial legislation. Its development in Great Britain. Contrast with American practice.
4. Industrial statistics. Occupational mortality. Pitfalls in records. Morbidity and labor turnover.
5. Activity and Fatigue. Physiology of activity. Methods of measuring. Hours of labor, spells and rest pauses.

And

6. Conditions of labor. Methods of work. Friday, February 4, at 11, and Monday, February 7, at 3:30.
7. Causation of accidents. Influences at work. Relation of health to accidents. Compensation. Tuesday, February 8, at 11.
8. Phthisis and industrialism. Clinical and statistical types of phthisis. Infancy, young adult, and middle age.

And

9. In primitive nations, in disturbed civilizations and old, settled communities. Records of various nations, of rural areas and town, of males and females, of war time. Wednesday, February 9, at 3:30, and Thursday, February 10, at 11.
10. Dust diseases. Asthma. Bronchitis. Pneumonia. Tuberculous silicosis. Types of dust. Industrial exposure.

And

11. Statistics and pathology of silicosis. Its prevention. Compensation. Friday, February 11, at 3:30, and Monday, February 14, at 3:30.
12. Coal mining. Food. Drink. Ventilation. Light and nystagmus. Posture and cellulitis. Methods of work. Dust. Pithead baths. Psychology and mortality. Welfare. Tuesday, February 15, at 9.
13. Cotton industry. Strippers' asthma. Mule spinners' cancer. Humidity. Weavers' cough. Mill fever. Thursday, February 17, at 11.
14. Lead poisoning. Entry in the body. Early and late symptoms. Statistics. Pathology. Friday, February 18, at 1:30.
15. Industrial gaseous poisons. CO. NO₂. H₂S. PH₃. AsH₃. Calsson Disease. Wednesday, February 23, at 3:30.
16. Dermatitis. Fat solvents. Hygroscopic fluids. Traumatic and idiopathic types. Thursday, February 24, at 11.
17. Benzene and other volatile solvents. Friday, February 25, at 3:30.

Members of the medical profession are especially invited to attend this series of lectures.

SOCIETY MEETINGS

DISTRICT MEDICAL SOCIETIES

Essex North District Medical Society

Wednesday, May 4, 1927—Annual meeting. Russell Hall Young Men's Christian Association Building, 40 Lawrence Street. Lawrence.

Thursday, May 5, 1927—Censors meet for examination of candidates at Hotel Bartlett, 95 Main Street, Haverhill, at 2 P. M.

Essex South District Medical Society

Wednesday, March 2, 1927—Lynn Hospital, Clin. 5 P. M.: supper. 7 P. M. Dr. George Minot. "F pernicious Anemia, with Special Reference to Liver Diet." Discussion by Drs. Sargent of Salem and Reynolds of Danvers, ten minutes each.

Wednesday, April 6, 1927—Danvers State Hospital. Clin. 5 P. M. Dr. Allan W. Rowe, Chief of Research Service at Evans Memorial, "The Differential Diagnosis of Endocrine Disorders." Followed by dinner. Discussion by Drs. Wood of Hathorne and Kline of Beverly, ten minutes each.

Thursday, May 5, 1927—Censors meet for examination of candidates at the Salem Hospital, 3:30 P. M.

Gloucester. Speaker and subject to be announced later.

Wednesday, May 11, 1927—Annual meeting. The Tavern,

Norfolk District Medical Society

Below are the proposed meetings of the Norfolk District for the remainder of the year. Minor changes may be made in case of necessity.

March 1, 1927—Roxbury Masonic Temple, 8:15 P. M. Dr. Robert B. Greenough. To be devoted to a talk on cancer, with a résumé of the results of colloidal lead treatment.

March 29, 1927—Roxbury Masonic Temple, 8:15 P. M. Drs. F. S. Newell and F. J. Irving. "The Modern Treatment of the Eclampsias and Toxemias of Pregnancy." If time permits—"The Modern Methods of Handling Prospective Cesarean Cases."

May 10, 1927—Annual meeting. Details of meeting to be announced.

Suffolk District Medical Society

Meetings of the Suffolk District Medical Society and the Boston Medical Library will be held at the Boston Medical Library, 8 The Fenway, Boston, at 8:15 P. M., as follows:

February 23, 1927—Surgical Section. "Clinic on Neurological Cases at the Peter Bent Brigham Hospital," Dr. Harvey Cushing.

March 30, 1927—Medical Section. Subject and speaker to be announced later.

April 27, 1927—Annual meeting. Election of officers. "Medical Education in the Orient and Occident," Dr. David L. Edsall, Dean, Harvard Medical School.

Notices of meetings must reach the JOURNAL office on the Friday preceding the date of issue in which they are to appear.

BOOK REVIEWS

The Life and Time of Adolf Kussmaul. By THEODORE H. BAST, Ph.D. Paul B. Hoeber, Inc., New York, 1926, xiii + 131 pages.

Kussmaul (1922-1904) was noted both as a teacher and as a practitioner. His teaching life extended over a period of forty-two years, in four universities—Heidelberg, Erlangen, Freiburg, and Strassburg. A very large following of patients, many with chronic disease, sought his aid wherever he went and many found comfort in his kindly personality. He also is remembered for his early work on the ophthalmoscope and later on the esophagoscope and gastro-scope. Partly through his efforts, the whole field of investigation of the cavities of the body by lighted instruments was visualized. Kussmaul also described, in 1874, a peculiar type of dyspnoea found in diabetes, which goes by his name, "Kussmaul's respiration."

Bast has written a short sketch of his life, laying stress on the formative years when Kussmaul was a student at Heidelberg and elsewhere. Kussmaul published his own autobiography and much of Bast's material is abstracted from it.

The Treatment of the Acute Abdomen, Operative and Postoperative. By ZACHARY COPE.

This is a small volume written primarily as a guide to the isolated general practitioner who finds himself occasionally confronted with the surgically acute abdomen. It is so rich in excellent suggestions as to effective after treatment that any general surgeon will be repaid for the careful perusal of its pages. It seems that the author has been able to put more meat into this small space than could be expected. Undoubtedly a résumé of his own personal experience, one can readily visualize that much thought and close observation has been combined with the management of a vast number of surgical cases.